St Andrew's Academy

Mathematics Department

S2 BLOCK 2

Length, Perimeter & Area

Name :_____ Score :_____

Line Segment - Ruler

Centimeter: S1

Measure the length of each line segment.

1) ☐ cm

2) ☐ cm

3) ☐ cm

4) ☐ cm

5) ☐ cm

Draw a line segment for each measure.

6) 4 cm

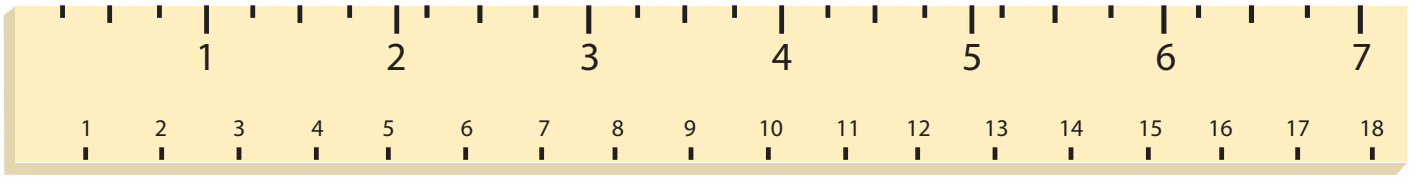
7) 9 cm

8) 6 cm

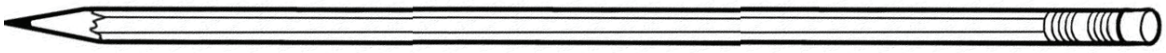
9) 13 cm

10) 7 cm

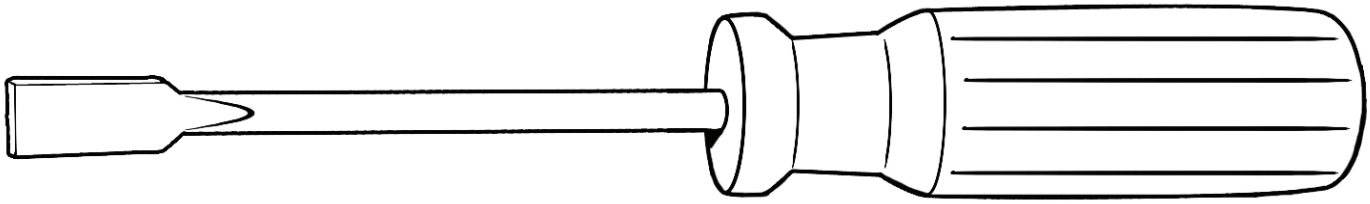
Inches and Centimeters



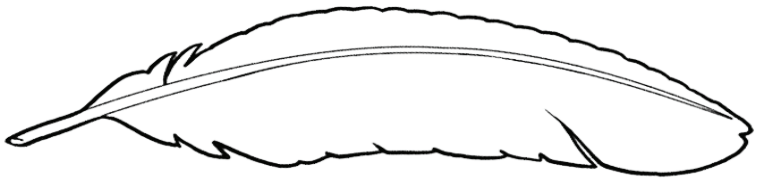
Use a ruler to measure the objects below.



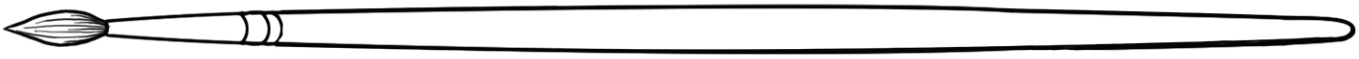
_____ inches



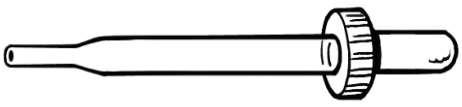
_____ inches



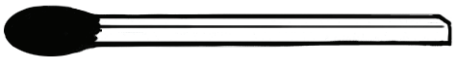
_____ inches



_____ centimeters



_____ centimeters



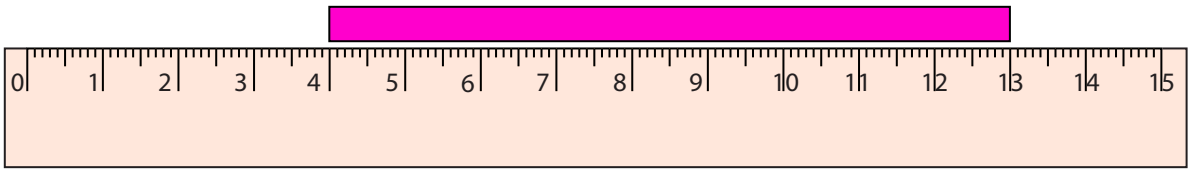
_____ centimeters

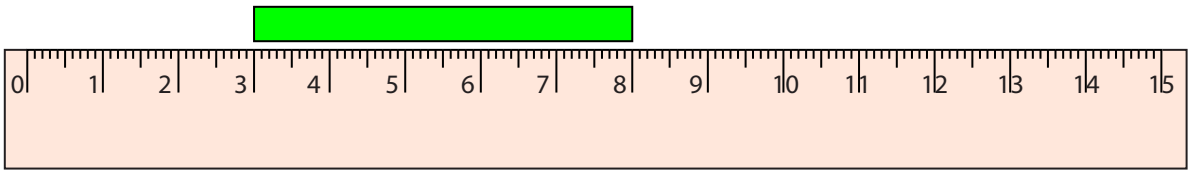
Name :_____ Score :_____

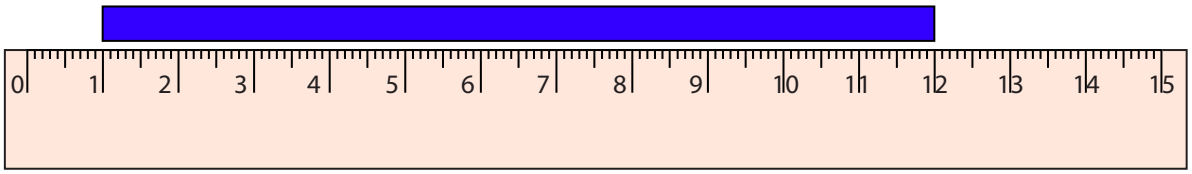
Measuring Bars

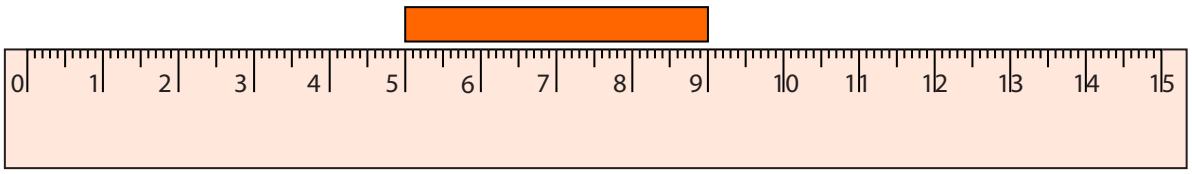
Whole Centimeter: S1

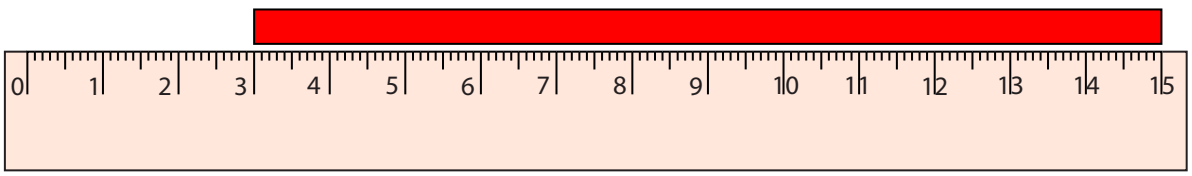
Measure the length of each bar.

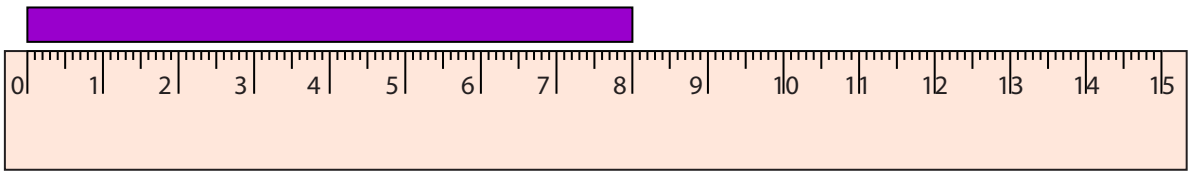
1)  _____ cm

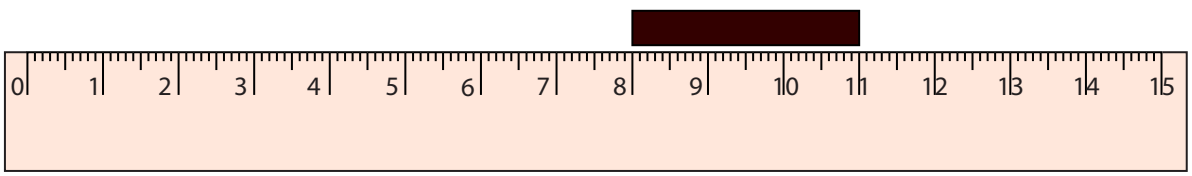
2)  _____ cm

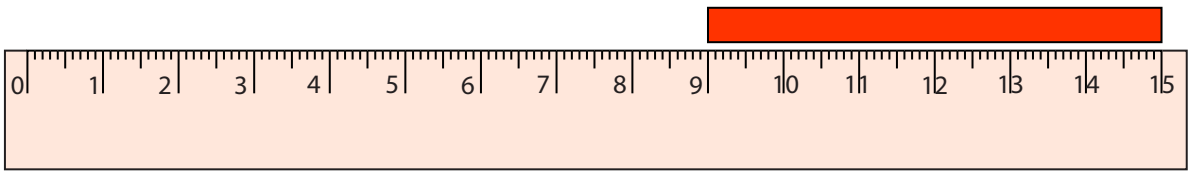
3)  _____ cm

4)  _____ cm

5)  _____ cm

6)  _____ cm

7)  _____ cm

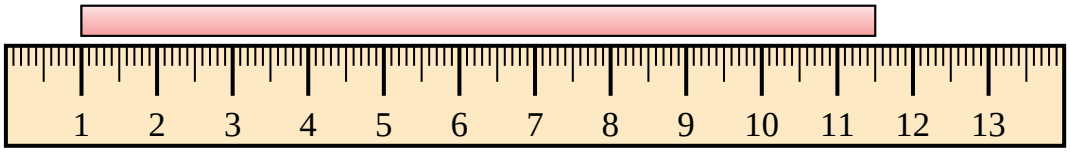
8)  _____ cm

Finding Metric Length

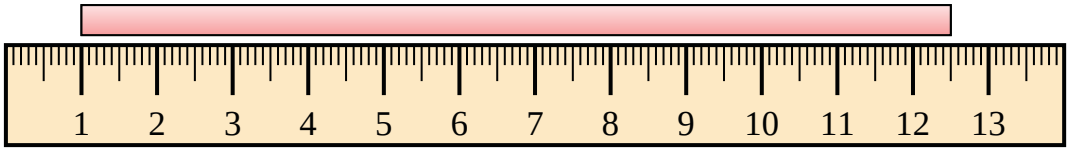
Name:

Find the length of each bar. Write your answer in centimeters (cm).

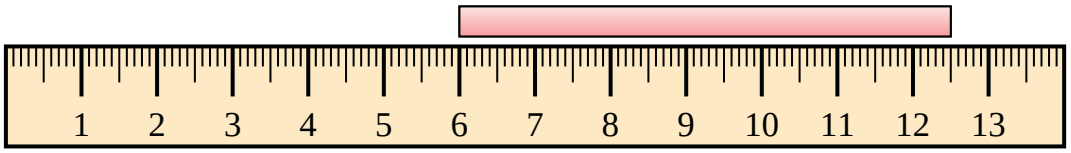
1)



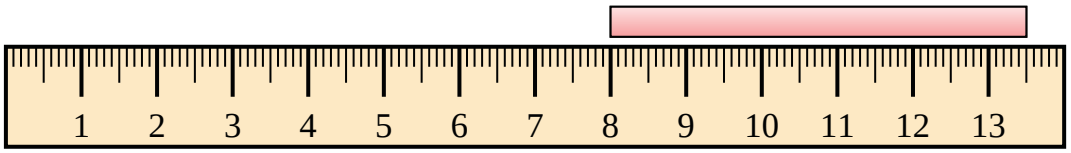
2)



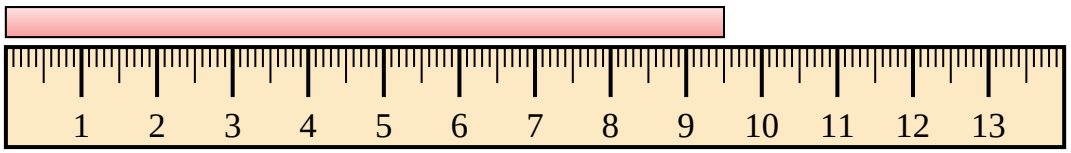
3)



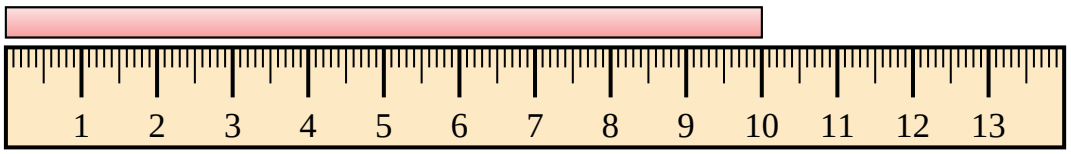
4)



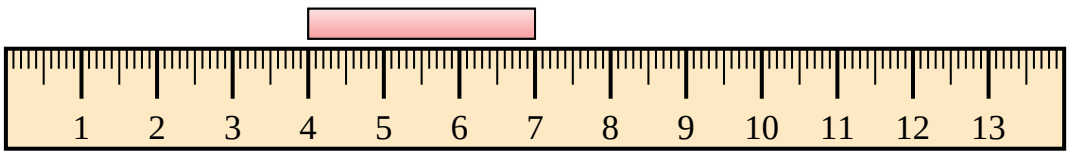
5)



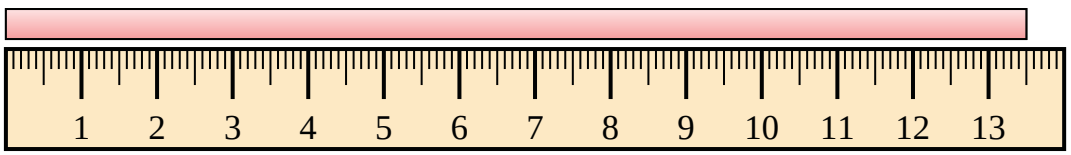
6)



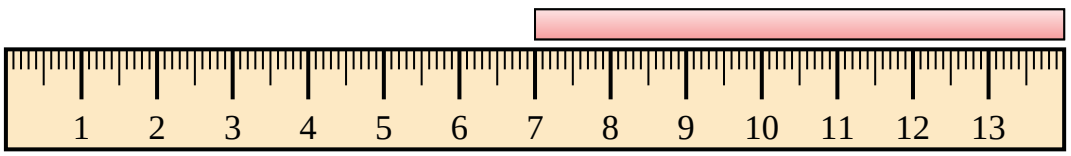
7)



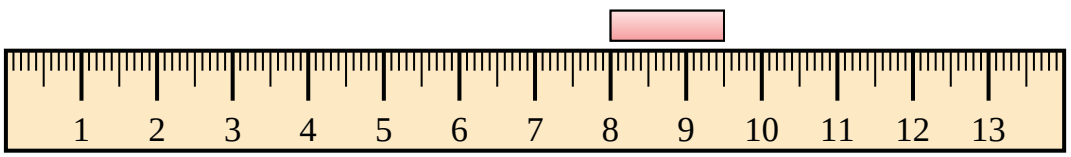
8)



9)



10)



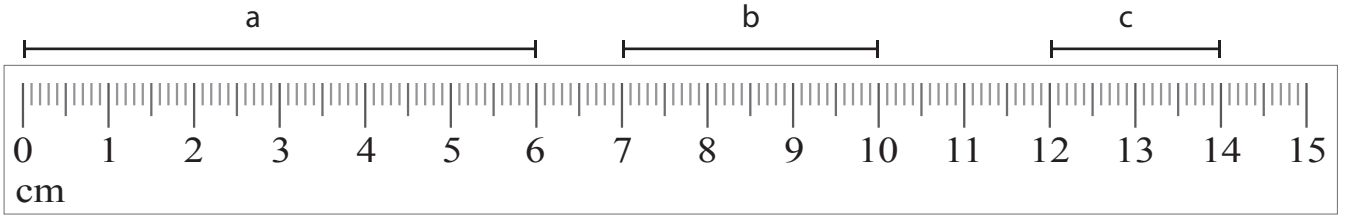
Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

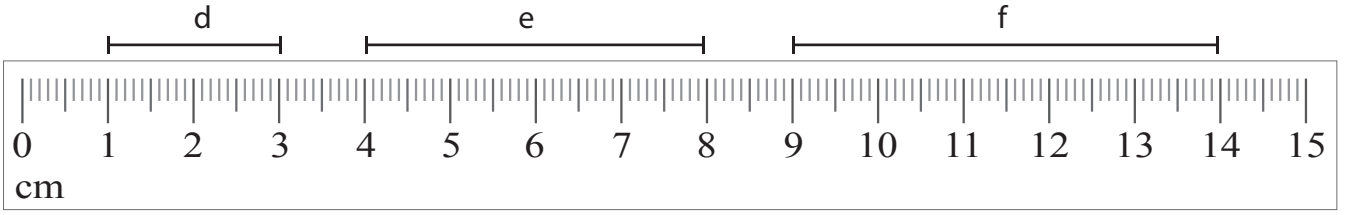
Measure Line Segments

Name: _____ Class: _____

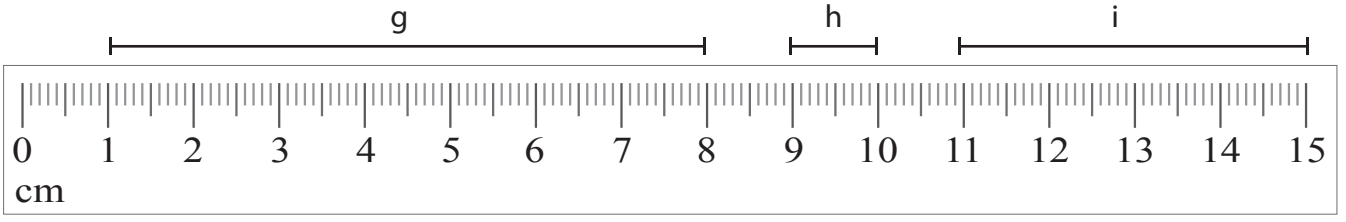
Use the ruler and measure the length of the line segments to the nearest centimeter.



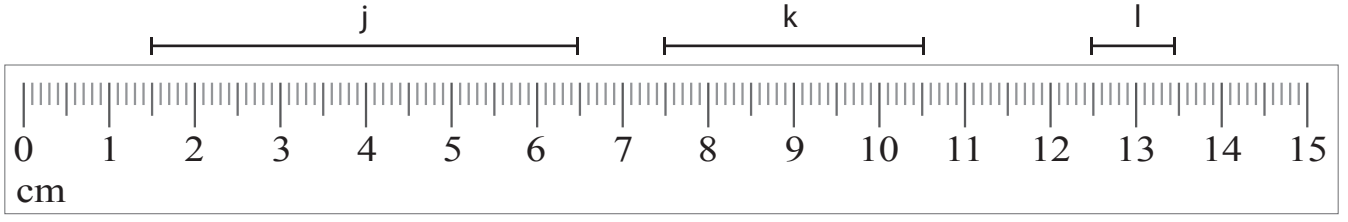
a = _____ b = _____ c = _____



d = _____ e = _____ f = _____



g = _____ h = _____ i = _____

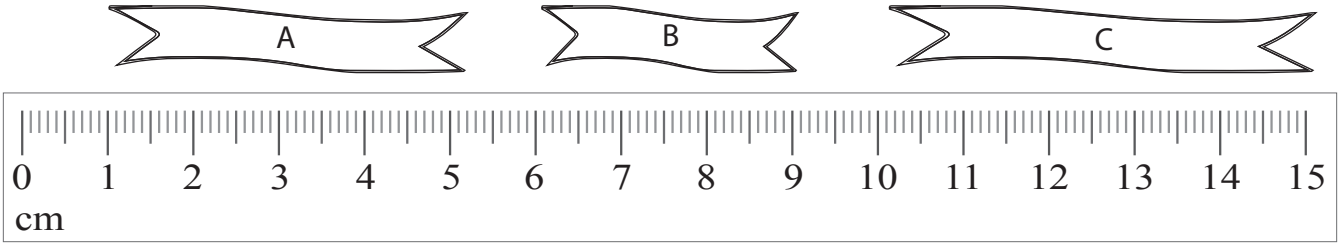


j = _____ k = _____ l = _____

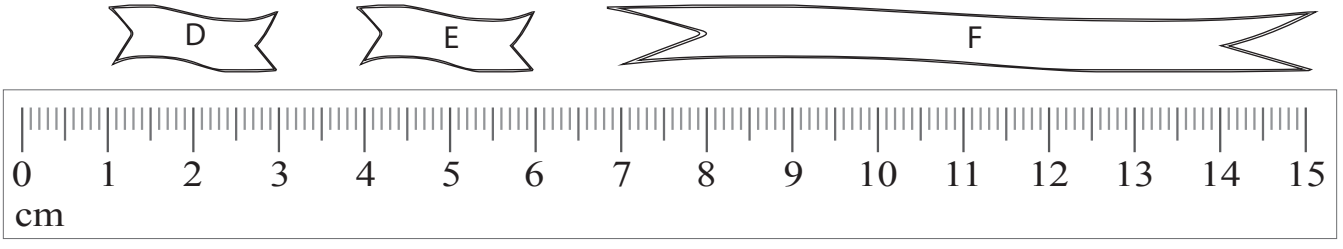
Measure Ribbons

Name: _____ Class: _____

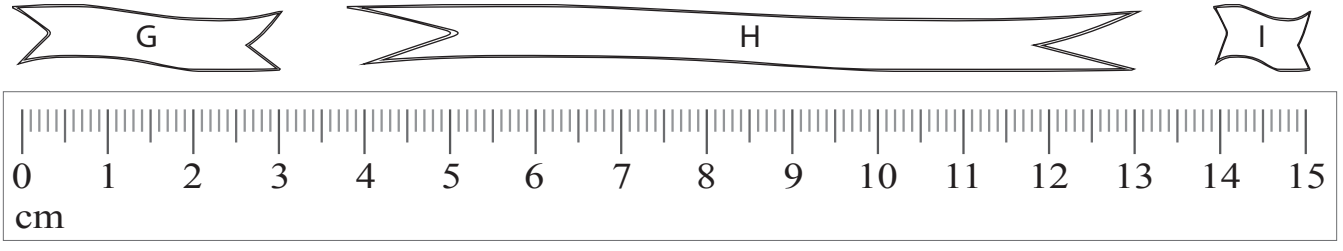
Use the ruler and measure the length of the ribbons to the nearest centimeter..



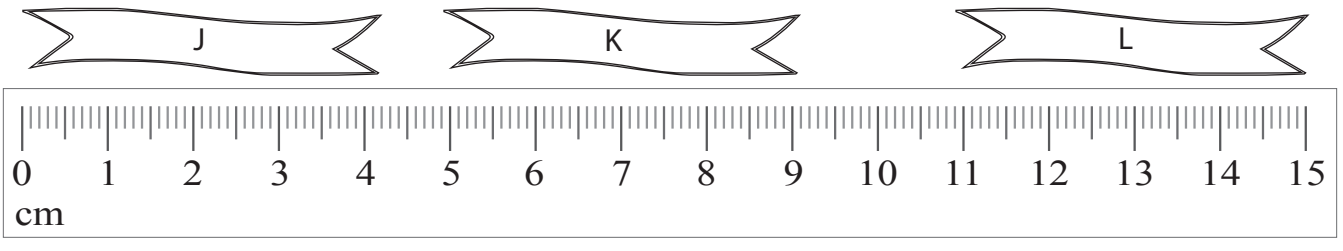
Ribbon A = _____ Ribbon B = _____ Ribbon C = _____



Ribbon D = _____ Ribbon E = _____ Ribbon F = _____



Ribbon G = _____ Ribbon H = _____ Ribbon I = _____



Ribbon J = _____ Ribbon K = _____ Ribbon L = _____

Length Word Problems

Name: _____ Class: _____

Solve the following word problems. Show number sentence and your workings.

1. A car is 4 meters long and a boat is 8 meters long. How long are the car and boat altogether?

2. A ruler is 10 inches long. What is the length of 2 rulers?

3. James is 100 centimeter tall and little Johnny is 90 centimeters tall. How much taller is James than litlle Johnny?

4. A tree is 7 meters high. A giraffe is 2 meters shorter than the tree. How tall is the giraffe?

5. My pencil is 10 centimeters long. My eraser is 5 centimeters shorter than the pencil. What is their total length?

6. A book is 45 centimeters long. A pen is 13 centimeters long. How much longer is the book than the pen?

Length Word Problems

Name: _____ Class: _____

Solve the following word problems. Show number sentence and your workings.

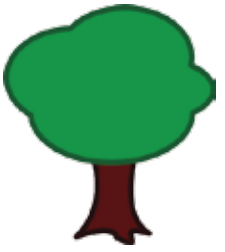
1. A helicopter is 7 meters long and an airplane is 12 meters long. How much longer is the airplane?

2. A book is 19 centimers long. What is the length of 2 books?

3. I am 95 centimeter tall and my baby brother is 25 centimeters shorter than me. How tall is my baby brother?

4. A tree is 7 meters high. A giraffe is 2 meters shorter than the tree. How tall is the giraffe?

5. I am 1 meter tall and the top of the tree I am standing under reaches 7 meters higher than me. How high is the tree?



6. A long ruler is 60 centimeters long. A short ruler is 10 centimeters long. How much shorter is the short ruler than the long one?

Metric Units of Length

100 centimeters or 100 cm. = 1 meter or 1 m. 1,000 m. = 1 kilometer or 1 km.

Find the measurement of each item to the nearest meter to finish the sentence.

1. I am about _____ m. tall.
2. The door in my house is about _____ m. tall.
3. The living room wall is about _____ m. wide.

Find the equivalent measurement.

4. 100 cm. = _____ m.
5. 1,000 m. = _____ km.
6. 500 cm. = _____ m.
7. 7,000 m. = _____ km.
8. 1,000 cm. = _____ m.
9. 10,000 m. = _____ km.
10. 100,000 m. = _____ km.
11. 20 km. = _____ m.
12. 40 km. = _____ m.
13. 65 km. = _____ m.

Find the equivalent metric and U.S. Customary units of length for each of the following.

14. 4 in. = about _____ cm.
15. 8 cm. = about _____ in.
16. 6 in. = about _____ cm.
17. 23 cm. = about _____ in.
18. 1 ft. = about _____ cm.
19. 28 cm. = about _____ in.
20. 1 yd. = about _____ cm. or close to _____ m.

Centimeters and Millimeters

Name: _____ Class: _____

Fill in the correct numbers.

6 cm = ☐ mm

8 cm = ☐ mm

10 cm = ☐ mm

20 cm = ☐ mm

12 cm = ☐ mm

40 mm = ☐ cm

30 mm = ☐ cm

70 mm = ☐ cm

260 mm = ☐ cm

980 mm = ☐ cm

4 cm 9 mm = ☐ mm

9 cm 8 mm = ☐ mm

9 cm 14 mm = ☐ mm

15 cm 12 mm = ☐ mm

25 cm 80 mm = ☐ mm

17 cm 31 mm = ☐ mm

85 mm = ☐ cm ☐ mm

73 mm = ☐ cm ☐ mm

92 mm = ☐ cm ☐ mm

187 mm = ☐ cm ☐ mm

233 mm = ☐ cm ☐ mm

485 mm = ☐ cm ☐ mm

Centimeters and Millimeters

Name: _____ Class: _____

Fill in the correct numbers.

1.1 cm = ☐ mm

0.2 cm = ☐ mm

2.9 cm = ☐ mm

0.8 cm = ☐ mm

6.2 cm = ☐ mm

17 mm = ☐ cm

35 mm = ☐ cm

57 mm = ☐ cm

211 mm = ☐ cm

374 mm = ☐ cm

3 cm 6 mm = ☐ cm

4 cm 8 mm = ☐ cm

4 cm 13 mm = ☐ cm

11 cm 35 mm = ☐ cm

18 cm 20 mm = ☐ cm

17 cm 12 mm = ☐ cm

2.5 cm = ☐ cm ☐ mm

5.3 cm = ☐ cm ☐ mm

3.9 cm = ☐ cm ☐ mm

11.8 cm = ☐ cm ☐ mm

21.6 cm = ☐ cm ☐ mm

23.4 cm = ☐ cm ☐ mm

Name : _____ Score : _____

Metric Unit Conversion - Length

Centimeter/Millimeter: T1S1

Example 1 : 23.5 cm = _____ mm	Example 2 : 235 mm = _____ cm
1 cm = 10 mm 23.5 cm = 23.5×10 = **235 mm**	**10 mm = 1 cm** 235 mm = $\frac{235}{10}$ = **23.5 cm**

Convert the following centimeters (cm) to millimeters (mm).

1) 51.5 cm = _____ mm	2) 23.32 cm = _____ mm
3) 41 cm = _____ mm	4) 77 cm = _____ mm
5) 96.6 cm = _____ mm	6) 13.74 cm = _____ mm
7) 8.26 cm = _____ mm	8) 62.2 cm = _____ mm

Convert the following millimeters (mm) to centimeters (cm).

9) 890 mm = _____ cm	10) 482.1 mm = _____ cm
11) 41.2 mm = _____ cm	12) 364 mm = _____ cm
13) 838 mm = _____ cm	14) 91.23 mm = _____ cm
15) 637 mm = _____ cm	16) 212.2 mm = _____ cm

Meters and Centimeters

Name: _____ Class: _____

Fill in the correct numbers.

6 m = ☐ cm

8 m = ☐ cm

5 m = ☐ cm

9 m = ☐ cm

12 m = ☐ cm

400 cm = ☐ m

300 cm = ☐ m

1,300 cm = ☐ m

1,000 cm = ☐ m

1,400 cm = ☐ m

3 m 60 cm = ☐ cm

2 m 72 cm = ☐ cm

9 m 15 cm = ☐ cm

15 m 12 cm = ☐ cm

22 m 80 cm = ☐ cm

31 m 31 cm = ☐ cm

311 cm = ☐ m ☐ cm

205 cm = ☐ m ☐ cm

999 cm = ☐ m ☐ cm

1,111 cm = ☐ m ☐ cm

1,650 cm = ☐ m ☐ cm

1,890 cm = ☐ m ☐ cm

Name : _____ Score : _____

Metric Unit Conversion - Length

Meter/Centimeter: T1S1

Example 1 : 298 cm = _____ m	Example 2 : 2.98 m = _____ cm
100 cm = 1 m $298 \text{ cm} = \frac{298}{100}$ **= 2.98 m**	**1 m = 100 cm** $2.98 \text{ m} = 2.98 \times 100$ **= 298 cm**

Convert the following centimeters (cm) to meters (m).

1) 9200 cm = _____ m	2) 4620 cm = _____ m
3) 6426 cm = _____ m	4) 2130 cm = _____ m
5) 7718 cm = _____ m	6) 976 cm = _____ m
7) 3580 cm = _____ m	8) 5800 cm = _____ m

Convert the following meters (m) to centimeters (cm).

9) 83.6 m = _____ cm	10) 17.45 m = _____ cm
11) 79.21 m = _____ cm	12) 28.64 m = _____ cm
13) 87.9 m = _____ cm	14) 3 m = _____ cm
15) 3.49 m = _____ cm	16) 25.3 m = _____ cm

Kilometers and Meters

Name: _____ Class: _____

Fill in the correct numbers.

6 km = ☐ m		9,000 m = ☐ km	
8 km = ☐ m		3,000 m = ☐ km	
15 km = ☐ m		10,000 m = ☐ km	
16 km = ☐ m		11,000 m = ☐ km	
26 km = ☐ m		12,000 m = ☐ km	

8 km 250 m = ☐ m		9,512 m = ☐ km	☐ m	
6 km 339 m = ☐ m		6,334 m = ☐ km	☐ m	
5 km 4 m = ☐ m		4,888 m = ☐ km	☐ m	
10 km 900 m = ☐ m		2,501 m = ☐ km	☐ m	
15 km 10 m = ☐ m		15,014 m = ☐ km	☐ m	
14 km 3 m = ☐ m		23,002 m = ☐ km	☐ m	

Kilometers and Meters

Name: _____ Class: _____

Fill in the correct numbers.

1.2 km = ☐ m

0.12 km = ☐ m

1.07 km = ☐ m

2.5 km = ☐ m

2.05 km = ☐ m

3,200 m = ☐ km

1,090 m = ☐ km

10,800 m = ☐ km

20,900 m = ☐ km

220 m = ☐ km

8 km 250 m = ☐ km

6 km 330 m = ☐ km

4 km 40 m = ☐ km

10 km 900 m = ☐ km

15 km 10 m = ☐ km

24 km 30 m = ☐ km

9.8 km = ☐ km ☐ m

6.33 km = ☐ km ☐ m

4.08 km = ☐ km ☐ m

2.51 km = ☐ km ☐ m

15.01 km = ☐ km ☐ m

23.2 km = ☐ km ☐ m

Name : _____ Score : _____

Convert - km to m

Sheet 1

Example :
6.5 km = _____ m

1 km = 1000 m

6.5 km = 6.5 x 1000 m

= **6500 m**

Convert the following kilometers (km) to meters (m).

1) 15.25 km = _____ m	2) 8.6 km = _____ m
3) 2.232 km = _____ m	4) 64.248 km = _____ m
5) 72.43 km = _____ m	6) 56.2 km = _____ m
7) 48 km = _____ m	8) 60.366 km = _____ m
9) 3.291 km = _____ m	10) 88.52 km = _____ m
11) 93 km = _____ m	12) 7.608 km = _____ m
13) 55.23 km = _____ m	14) 97.5 km = _____ m

Name : _____ Score : _____

T1S1

Length - Metric Unit Conversion

Convert between centimeters (cm) and millimeters (mm).

1) 12.7 cm = _____ mm	2) 54.54 mm = _____ cm
3) 710 mm = _____ cm	4) 94.2 cm = _____ mm
5) 47.68 cm = _____ mm	6) 653.6 mm = _____ cm

Convert between meters (m) and centimeters (cm).

7) 5900 cm = _____ m	8) 1450 cm = _____ m
9) 64.71 m = _____ cm	10) 36.32 m = _____ cm
11) 7630 cm = _____ m	12) 25.4 m = _____ cm

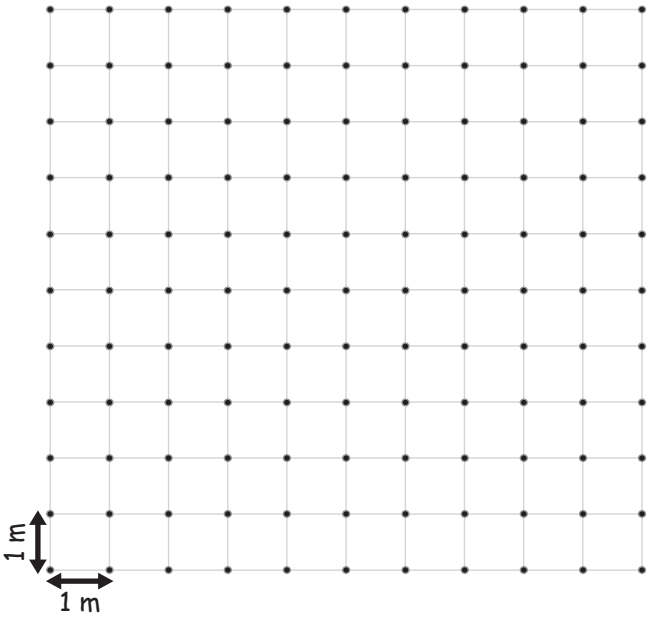
Convert between kilometers (km) and meters (m).

13) 21 km = _____ m	14) 19781 m = _____ km
15) 69580 m = _____ km	16) 78.32 km = _____ m
17) 9.5 km = _____ m	18) 41300 m = _____ km

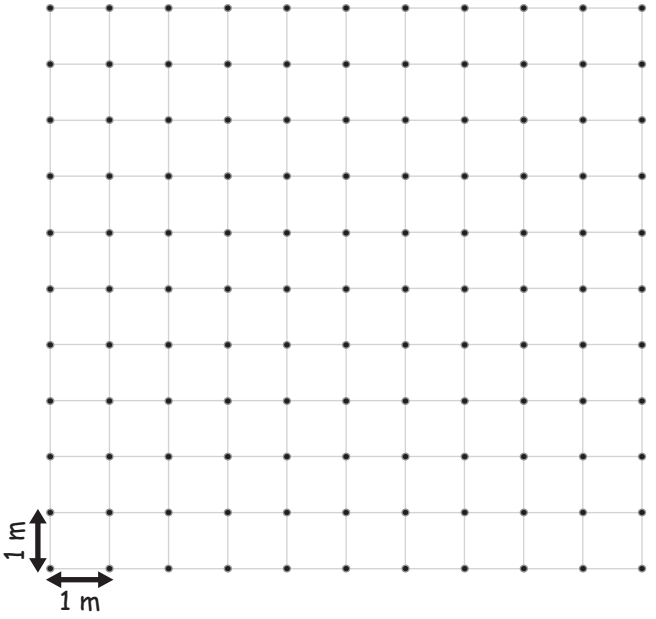
Drawing Perimeter

Name: _____ Class: _____

(I) Draw 3 different figures with a perimeter of 16 m.



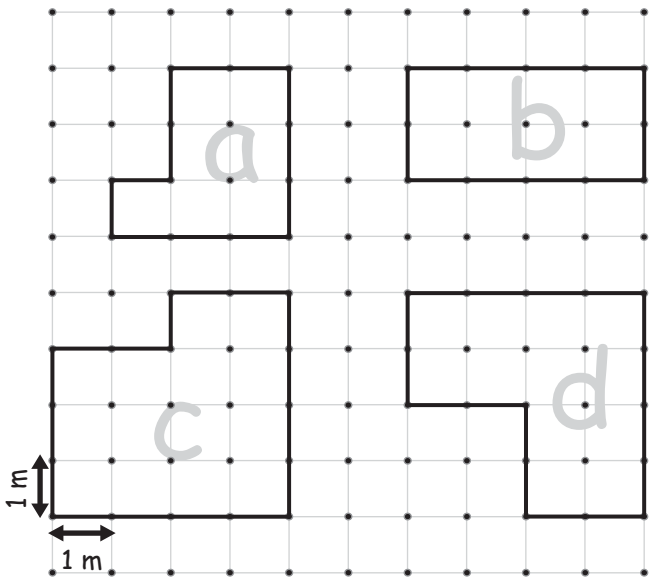
(I1) Draw 4 different figures with a perimeter of 12 m.



Perimeter

Name: _____ Class: _____

Use the 4 figures to answer the questions.



(a) What is the perimeter of figure a?

(b) What is the perimeter of figure b?

(c) What is the perimeter of figures b and d altogether?

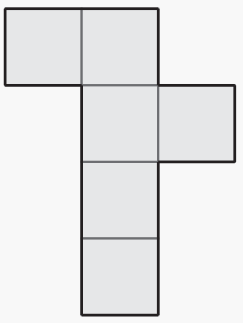
(d) Which 3 figures have the same perimeter?

(e) You want to put up a fence around all 4 figures.
If the price of doing so is 100 dollars per meter,
how much would you have to pay?

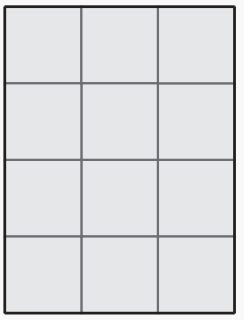
Finding Perimeter

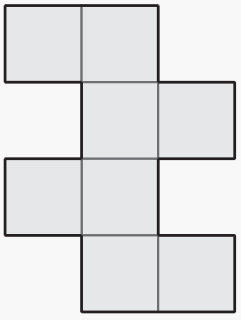
Name: _____ Class: _____

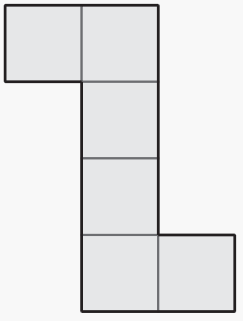
Find the perimeter of the following figures. 1 small block is 1 unit long.

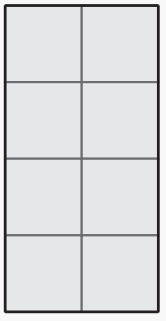


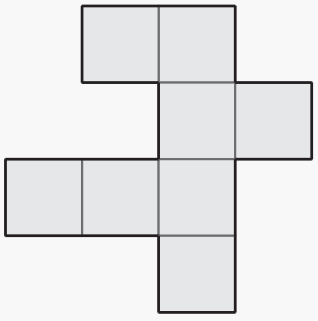
14 units

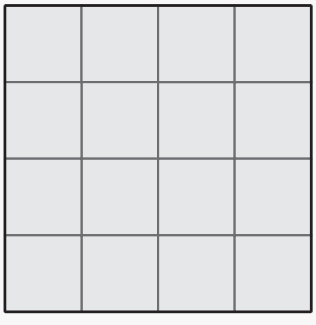


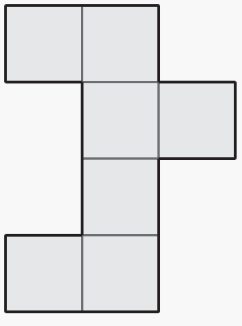


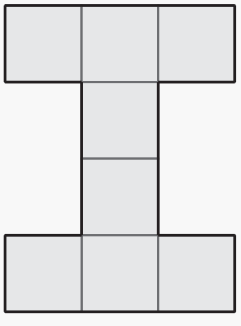












Corbett maths

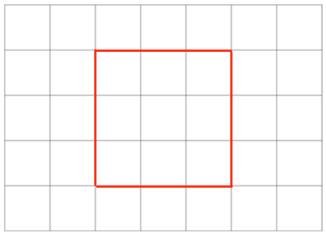
Perimeter: On a Grid

Video 242 on www.corbettmaths.com

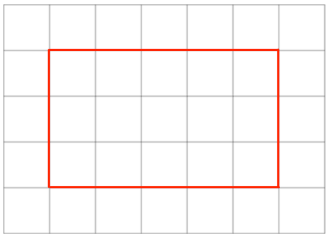
Workout

Question 1: The following shapes are drawn on centimetre-squared paper.
Find the perimeter of each shape.

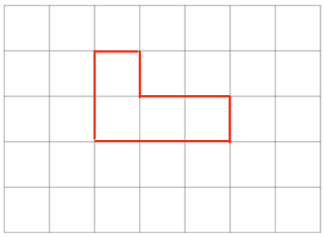
(a)



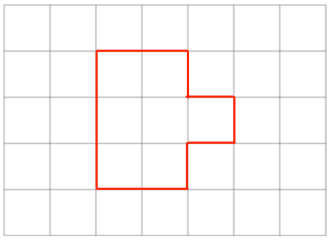
(b)



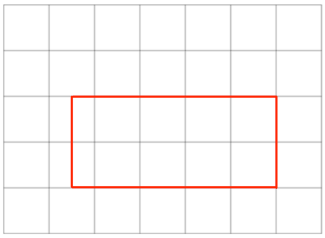
(c)



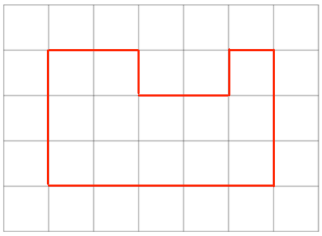
(d)



(e)

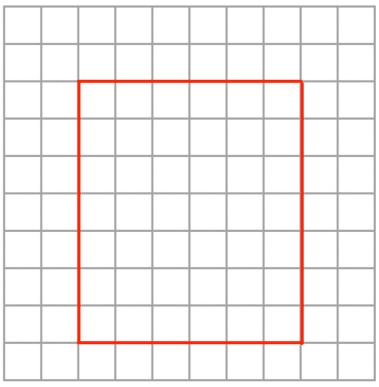


(f)

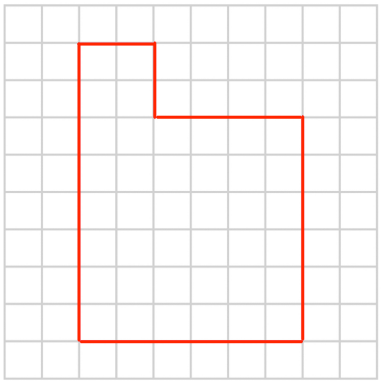


Question 2: The following shapes are drawn on centimetre-squared paper.
Find the perimeter of each shape.

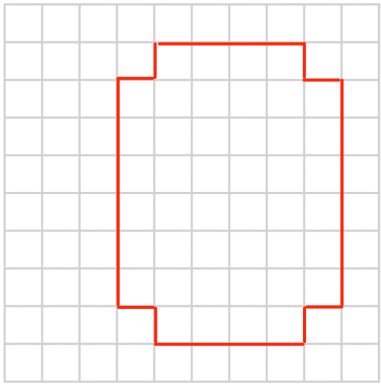
(a)



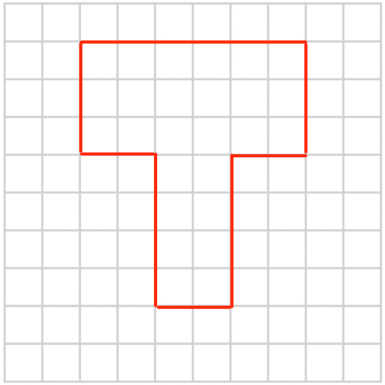
(b)



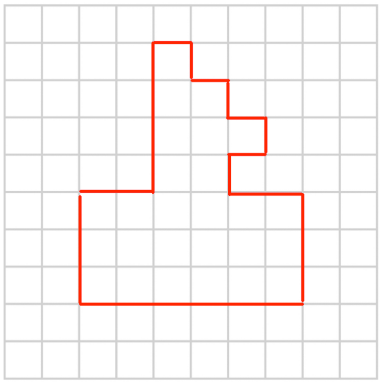
(c)



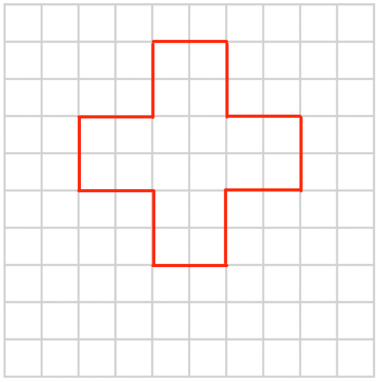
(d)



(e)



(f)



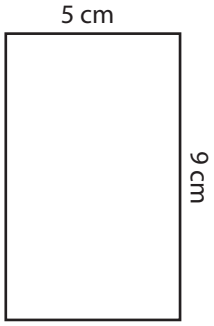
Name : _____ Score : _____

ES1

Rectangle - Perimeter

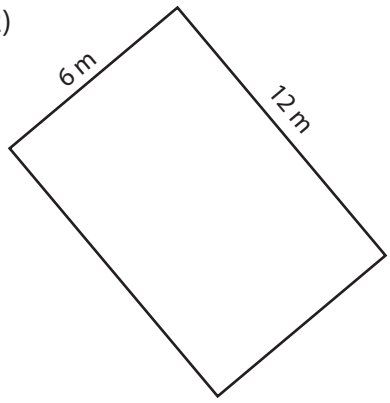
Find the perimeter of each rectangle.

1)



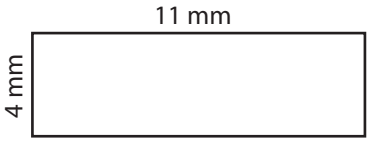
Perimeter = ____

2)



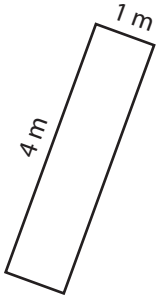
Perimeter = ____

3)



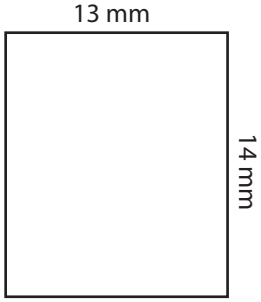
Perimeter = ____

4)



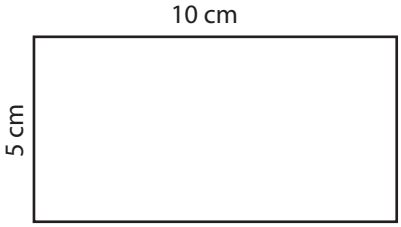
Perimeter = ____

5)



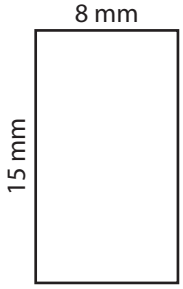
Perimeter = ____

6)



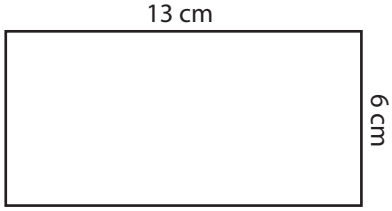
Perimeter = ____

7)



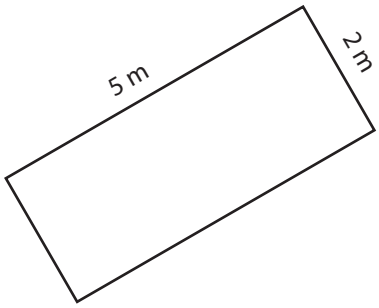
Perimeter = ____

8)



Perimeter = ____

9)



Perimeter = ____

Perimeter

Video 241 on www.corbettmaths.com

Examples

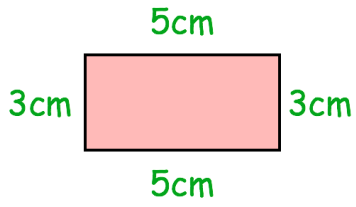
Workout

Click here

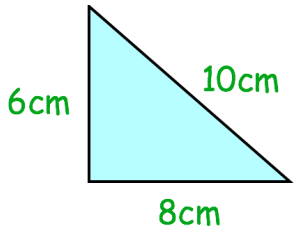
Scan here

Question 1: Work out the perimeter of each shape below

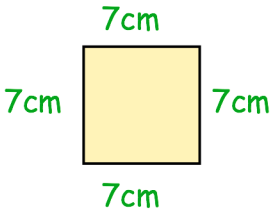
(a)



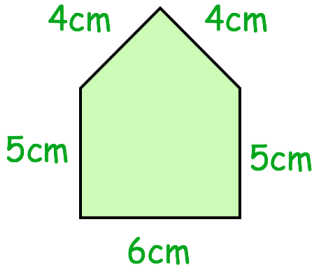
(b)



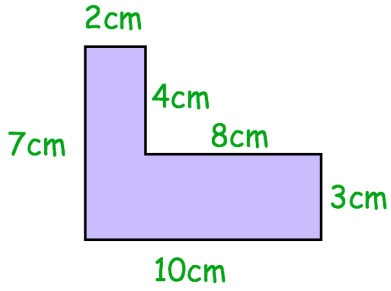
(c)



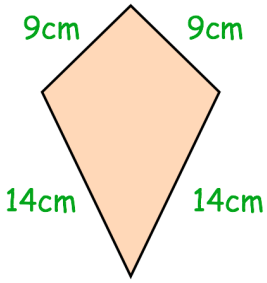
(d)



(e)

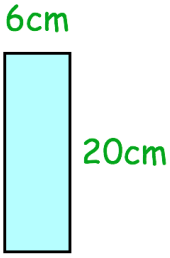


(f)

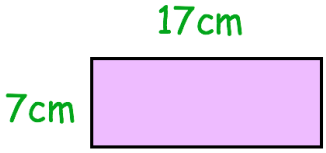


Question 2: Find the perimeter of each of these rectangles.

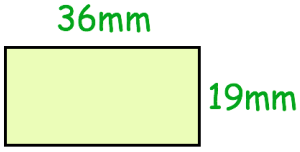
(a)



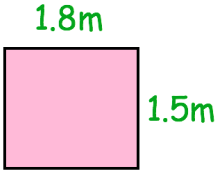
(b)



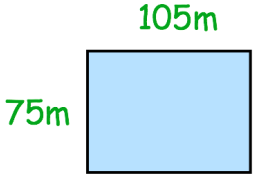
(c)



(d)



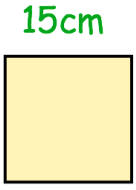
(e)



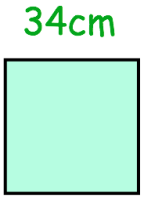
(f)

Question 3: Work out the perimeter of each of these squares

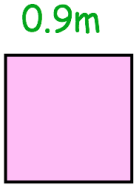
(a)



(b)



(c)

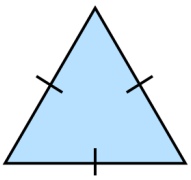


Perimeter

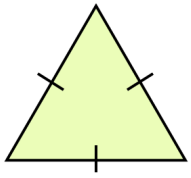
Video 241 on www.corbettmaths.com

Question 4: Work out the perimeter of each of these equilateral triangles

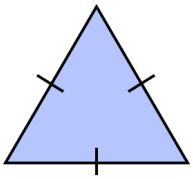
(a)



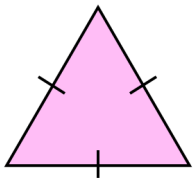
(b)



(c)

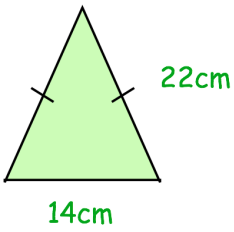


(d)

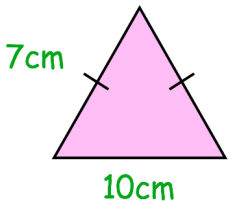


Question 5: Calculate the perimeter of each of these isosceles triangles

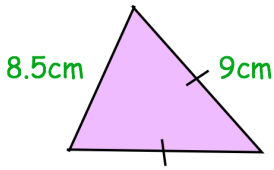
(a)



(b)

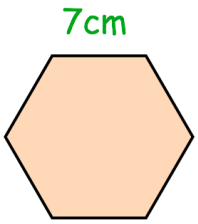


(c)

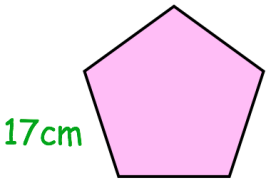


Question 6: Work out the perimeter of each of these regular shapes

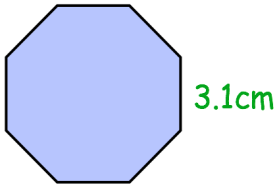
(a)



(b)

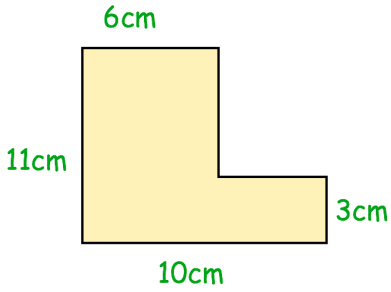


(c)

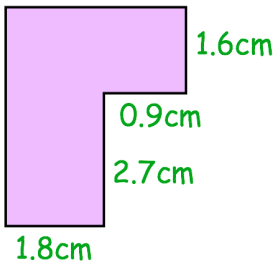


Question 7: Find the perimeter of each of these shapes

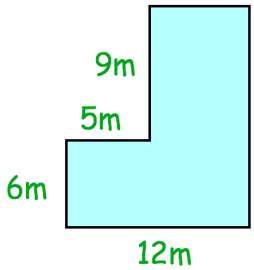
(a)



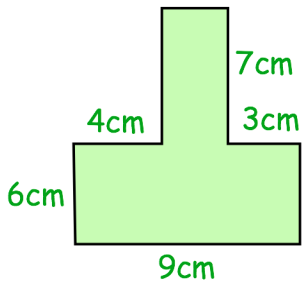
(b)



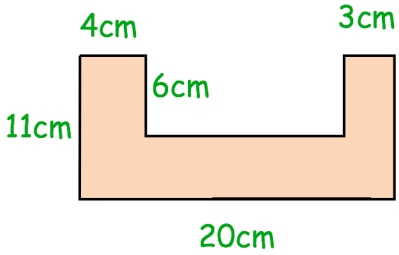
(c)



(d)



(e)

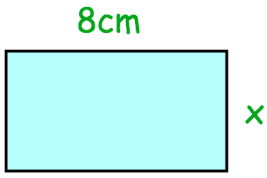


Perimeter

Video 241 on www.corbettmaths.com

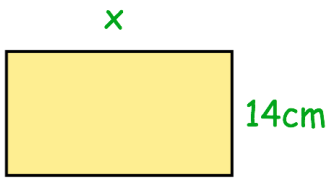
Question 8: The perimeter of each shape is given. Find the length of the missing side

(a)



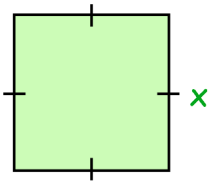
Perimeter = 26cm

(b)



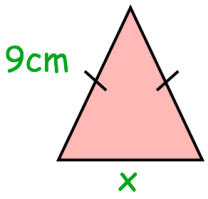
Perimeter = 80cm

(c)



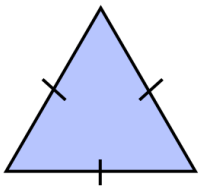
Perimeter = 20cm

(d)



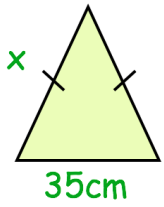
Perimeter = 25cm

(e)



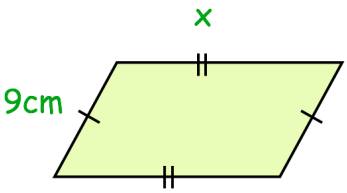
Perimeter = 36cm

(f)



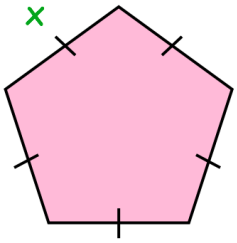
Perimeter = 79cm

(g)



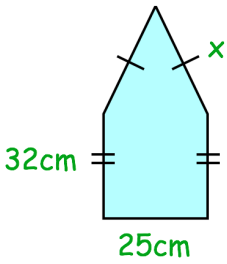
Perimeter = 45cm

(h)



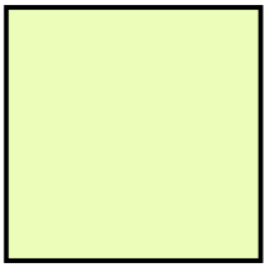
Perimeter = 2m

(i)



Perimeter = 163cm

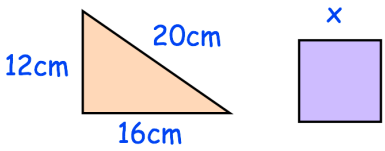
Apply



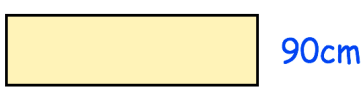
Question 1: The square is drawn accurately
Find the perimeter of the square.

Question 2: A rectangle has a perimeter of 18cm.
Write down a possible pair of values for its length and width

Question 3: The triangle and square have the same perimeter.
Find x



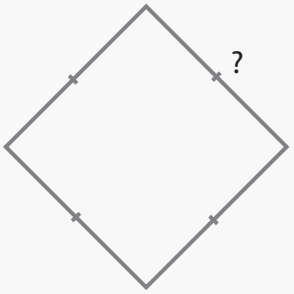
Question 4: Shown is a rectangle.
Work out the perimeter of the rectangle.



Unknown Side

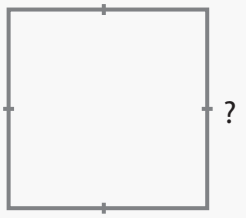
Name: _____ Class: _____

Find the length of the unknown sides given the perimeters of the following figures.



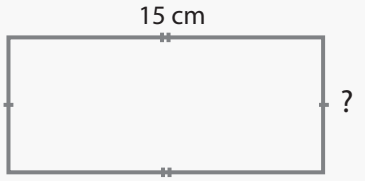
Perimeter: 20 cm

length ? : _____



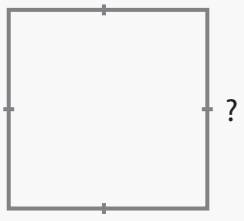
Perimeter: 32 cm

length ? : _____



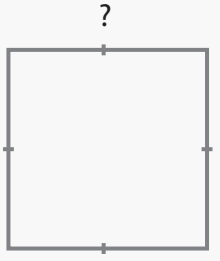
Perimeter: 40 cm

length ? : _____



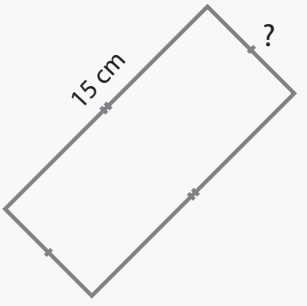
Perimeter: 28 cm

length ? : _____



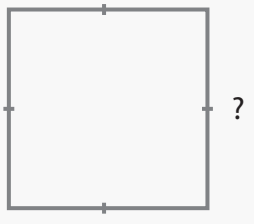
Perimeter: 48 cm

length ? : _____



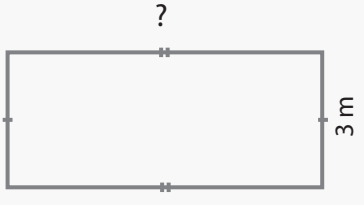
Perimeter: 42 cm

length ? : _____



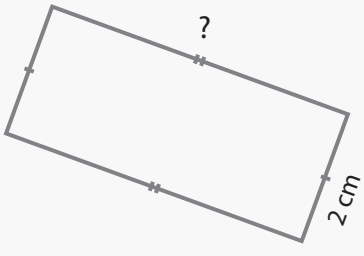
Perimeter: 30 cm

length ? : _____



Perimeter: 20 cm

length ? : _____



Perimeter: 16 cm

length ? : _____

Corbett maths

Perimeter: On a Grid

Video 242 on www.corbettmaths.com

Apply

Question 1: On centimetre-square paper, draw a rectangle with a perimeter of 14cm

Question 2: On centimetre-square paper, draw three different rectangles with an perimeter of 18cm

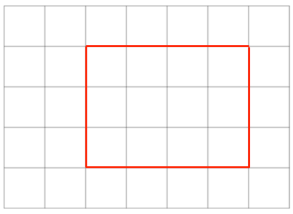
Question 3: A square has a perimeter of 24cm.
(a) Draw this square on centimetre-square paper.
(b) Find the area of the square.

Question 4: A rectangle has an area of $12cm^2$.
(a) Draw three possible rectangles on centimetre-square paper.
(b) Find the perimeter of three rectangles.

Question 5: A square has an area of $49cm^2$
(a) Draw this square on centimetre-square paper.
(b) Find the perimeter of the square.

Question 6: Draw a shape that has one line of symmetry and a perimeter of 10cm

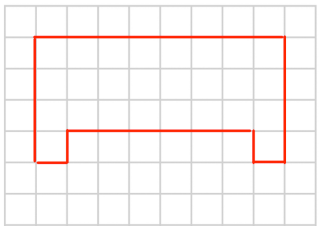
Question 7: Jasmine says the perimeter of this shape is 12cm.
Explain her mistake.



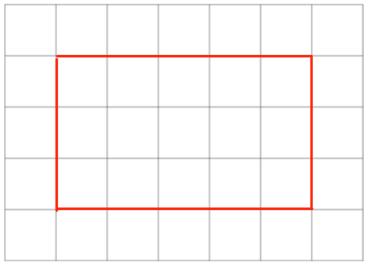
Question 8: An "equable" shape is a shape where the area and perimeter of the shape have the same numerical value.

The shape shown has an area of $26cm^2$ and a perimeter of 26cm.

Draw four more equable shapes.



Question 9: Martin has drawn the shape below.
He says it is possible to draw a shape with the same area but a larger perimeter.
Show Martin is correct.



Perimeter

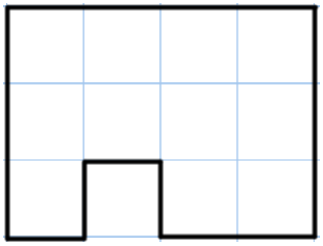
Increasingly Difficult Exercises

a)

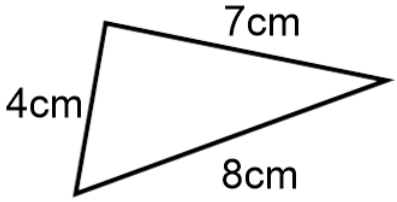
b)

c)

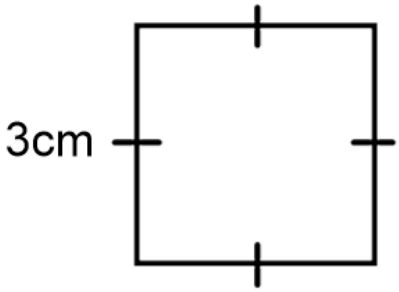
d)



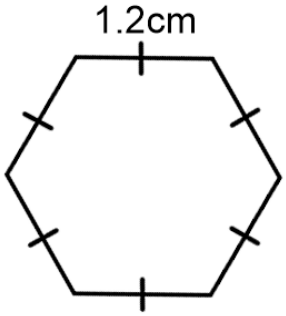
e)



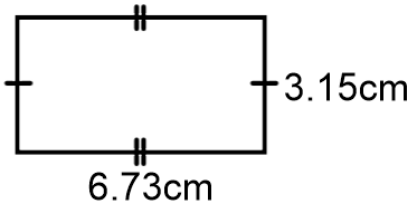
f)



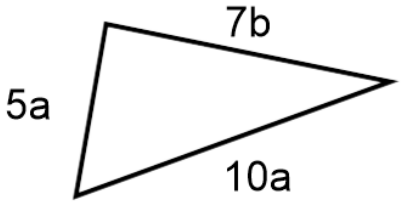
g)



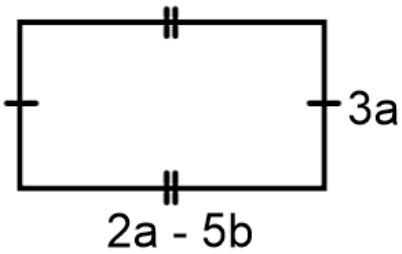
h)



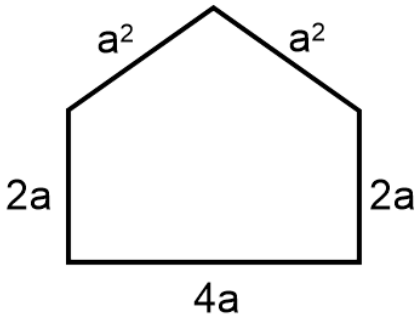
i)



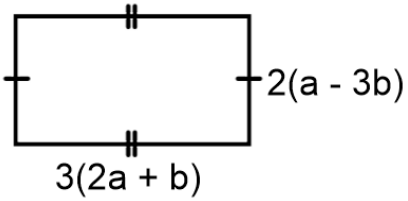
j)



k)



l)

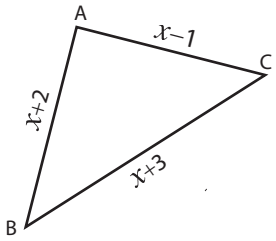


Name : _____ Score : _____

Triangle - Computing Sides

Sheet 1

Example:



Perimeter = 16 mm

Perimeter = Sum of length of the sides

16 mm = $x - 1 + x + 2 + x + 3$

16 mm = $3x + 4$

$3x = 16 - 4$

$x = \frac{12}{3}$ = **4 mm**

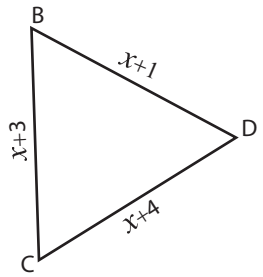
$\overline{AB} = x+2 = 4 + 2 =$ **6 mm**

$\overline{BC} = x+3 = 4 + 3 =$ **7 mm**

$\overline{AC} = x-1 = 4 - 1 =$ **3 mm**

Find the value of x and compute the length of the sides for each triangle.

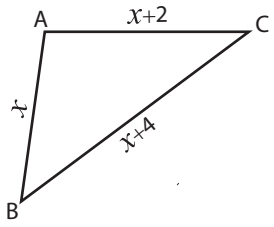
1)



Perimeter = 17 m ; x = _____

$\overline{BC}$ = _____ ; $\overline{CD}$ = _____ ; $\overline{BD}$ = _____

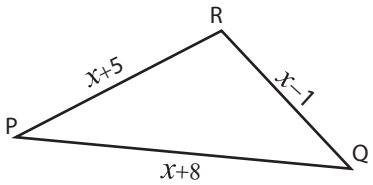
2)



Perimeter = 21 cm ; x = _____

$\overline{AB}$ = _____ ; $\overline{BC}$ = _____ ; $\overline{AC}$ = _____

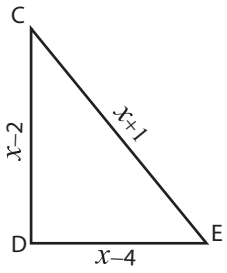
3)



Perimeter = 36 mm; x = _____

$\overline{PQ}$ = _____ ; $\overline{QR}$ = _____ ; $\overline{PR}$ = _____

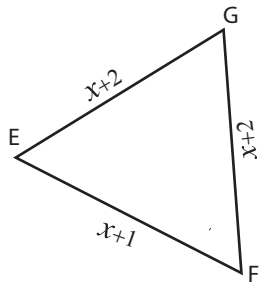
4)



Perimeter = 31 mm ; x = _____

$\overline{CD}$ = _____ ; $\overline{DE}$ = _____ ; $\overline{CE}$ = _____

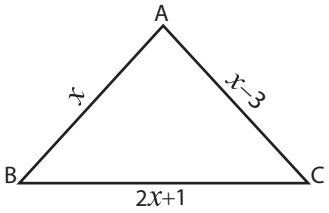
5)



Perimeter = 32 m ; x = _____

$\overline{EF}$ = _____ ; $\overline{FG}$ = _____ ; $\overline{EG}$ = _____

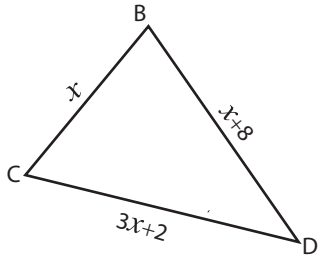
6)



Perimeter = 58 cm; x = _____

$\overline{AB}$ = _____ ; $\overline{BC}$ = _____ ; $\overline{AC}$ = _____

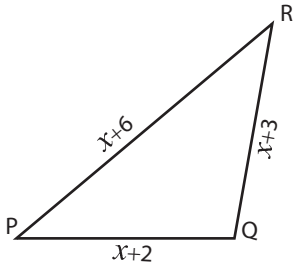
7)



Perimeter = 30 cm ; x = _____

$\overline{BC}$ = _____ ; $\overline{CD}$ = _____ ; $\overline{BD}$ = _____

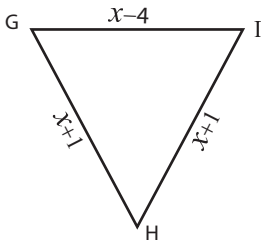
8)



Perimeter = 41 mm ; x = _____

$\overline{PQ}$ = _____ ; $\overline{QR}$ = _____ ; $\overline{PR}$ = _____

9)



Perimeter = 40 m ; x = _____

$\overline{GH}$ = _____ ; $\overline{HI}$ = _____ ; $\overline{GI}$ = _____

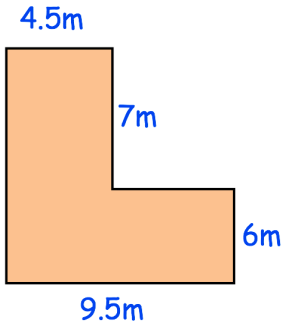
Perimeter

Video 241 on www.corbettmaths.com

Question 5: The length of a rectangular field is 60m greater than the width of the field.
The field has a length of 310m.
Find the perimeter of the field.

Question 6: Felicity wants to place a wooden fence around her vegetable garden.
Each metre of fencing costs £5.80

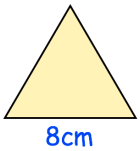
Work out the cost of the new fence

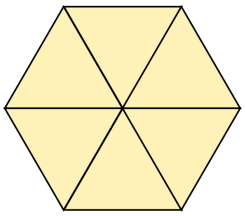


Question 7: Below is a coffee table.
The length of the table is 40cm more that the width of the table.
The perimeter of the table is 3.8m

Find the size of the length and width of the table

Question 8: Shown is an equilateral triangle with side length of 8cm.
Six of the triangles are put together to make a larger shape.
Find the perimeter of the larger shape.





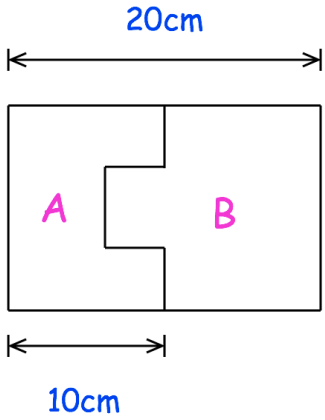
Question 9: A square has an area of $36cm^2$
Find the perimeter of the square.

Question 10: Andy says that all rectangles with an area of $24cm^2$ have the same perimeter
Show that Andy is wrong.

Perimeter

Video 241 on www.corbettmaths.com

Question 11: A rectangle is divided into two shapes, A and B



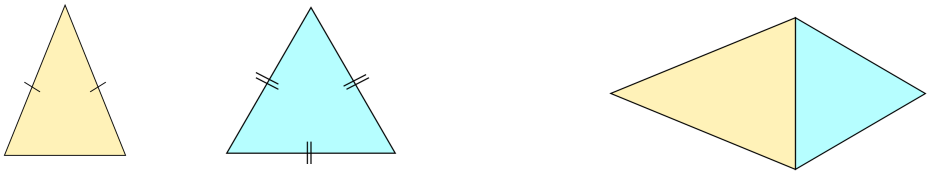
(a) Which of these statements is true?

- The area of A is greater than the area of B
- The area of A is less than the area of B
- The area of A is the same as the area of B

(b) Which of these statements is true?

- The perimeter of A is greater than the perimeter of B
- The perimeter of A is less than the perimeter of B
- The perimeter of A is the same as the perimeter of B

Question 12: An isosceles triangle has a perimeter of 73cm
An equilateral triangle has a perimeter of 51cm
The triangles are put together to make a kite.

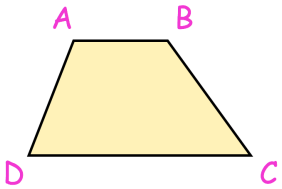


Work out the perimeter of the kite.

Question 13: Three congruent rectangles, are placed together to make the shape below.

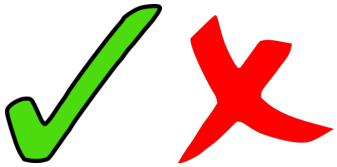
Find the perimeter of the shape.

Question 14: ABCD is a trapezium
AD is twice the length of AB
BC is 3cm longer than AD
DC is 19cm longer than AB
The perimeter of the trapezium is 49cm



Find the length of AB

Answers



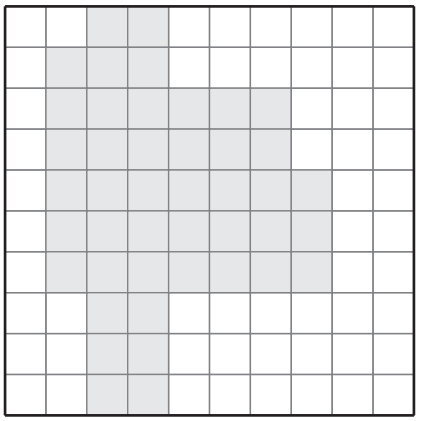
Click here

Scan here

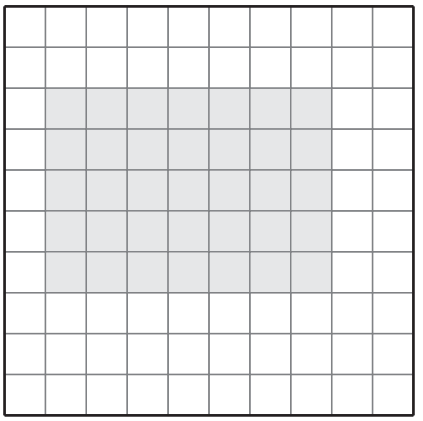
Area Blocks

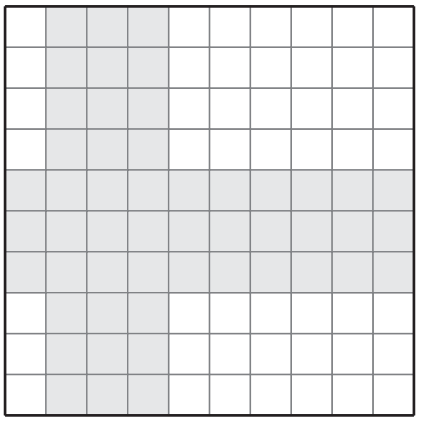
Name: _____ Class: _____

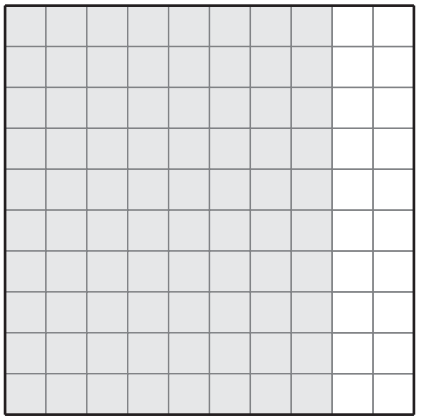
Determine the area of the following figures. Each shaded block equals 1 sq. unit.

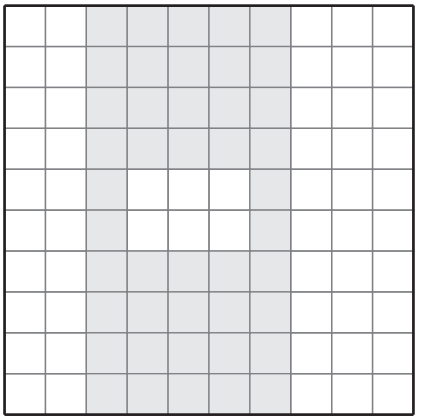


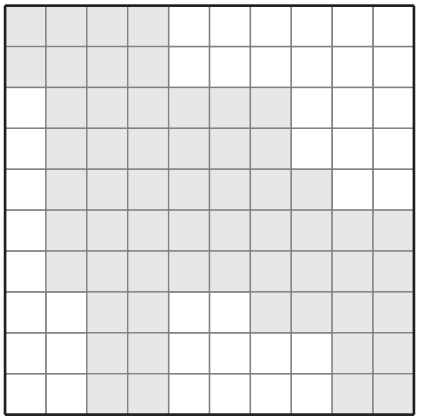
44 square units

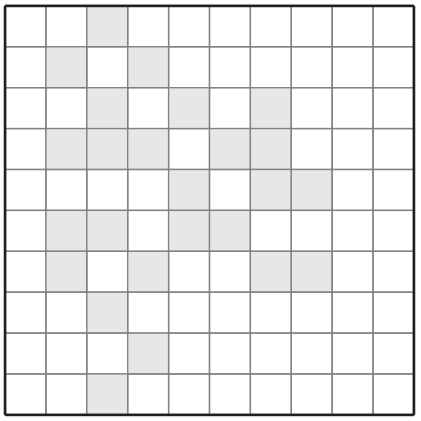


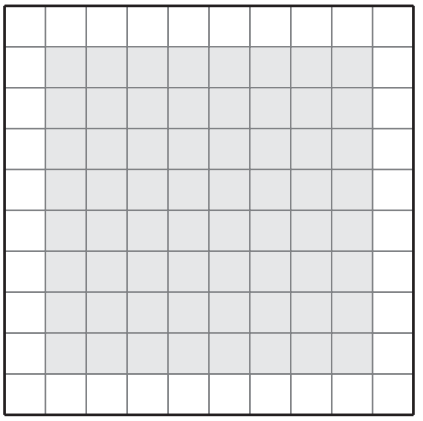


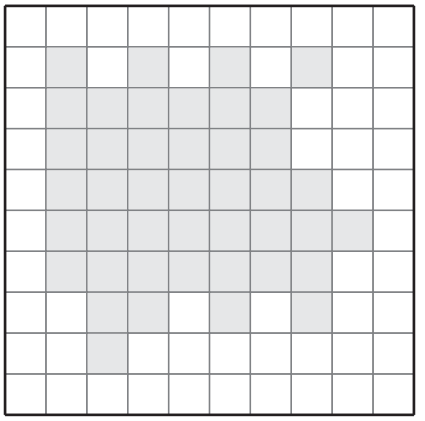








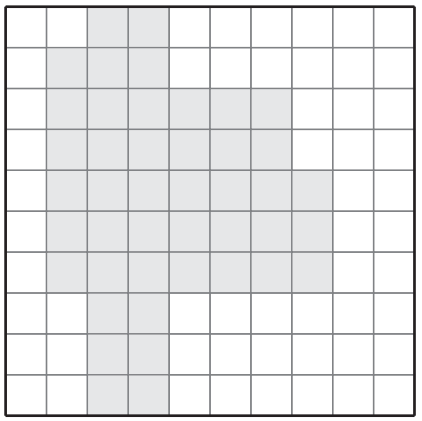




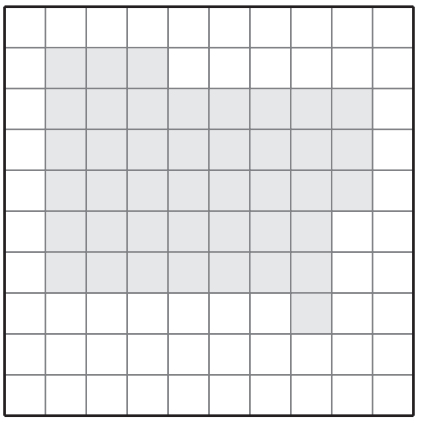
Area Blocks

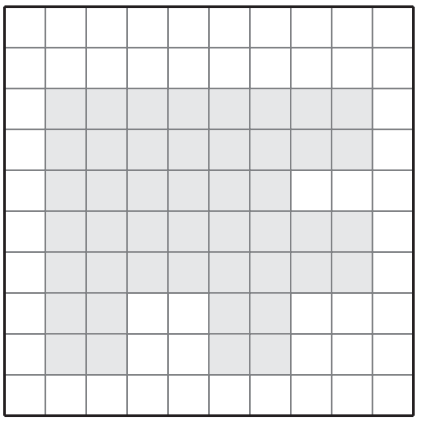
Name: _____ Class: _____

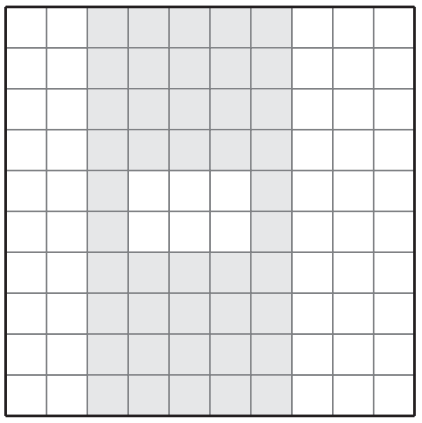
Determine the area of the following figures. Each shaded block equals 4 sq. units.

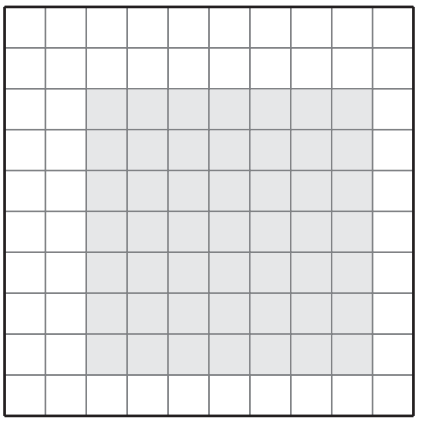


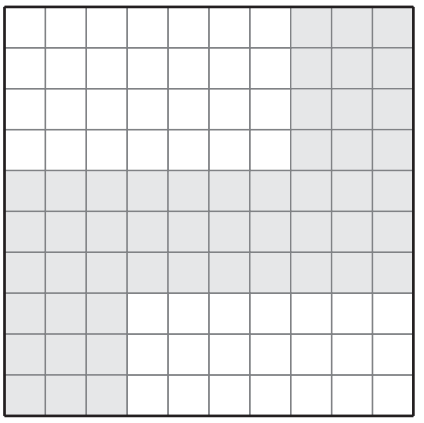
176 square units

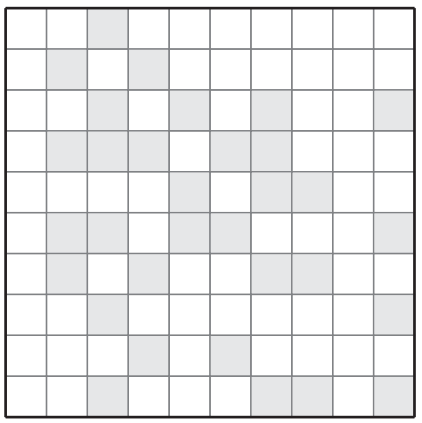


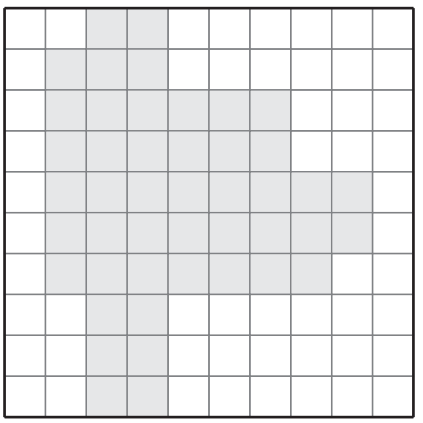


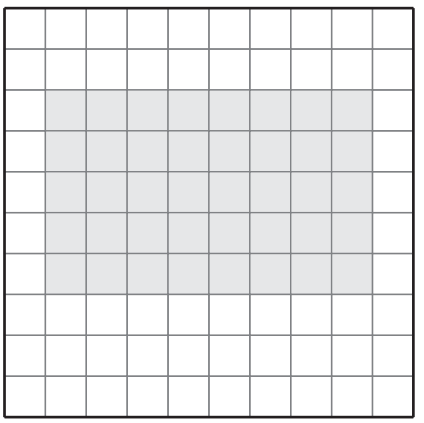












Area: On a Grid

Video 43 on www.corbettmaths.com

Examples

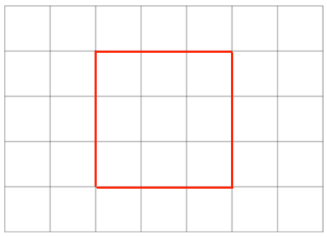
Workout

Click here

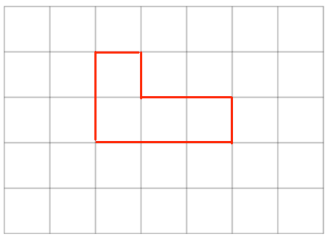
Scan here

Question 1: The following shapes are drawn on centimetre-squared paper. Find the area of each shape.

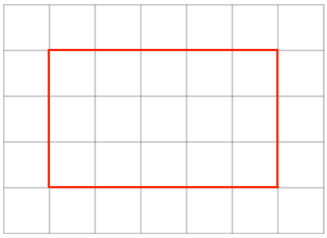
(a)



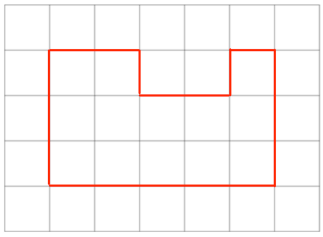
(b)



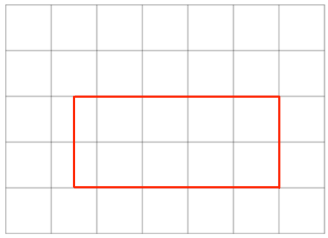
(c)



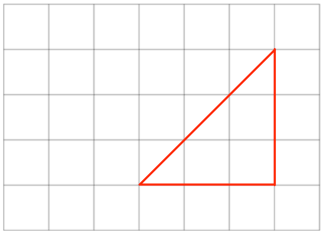
(d)



(e)

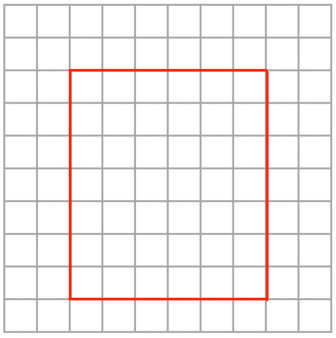


(f)

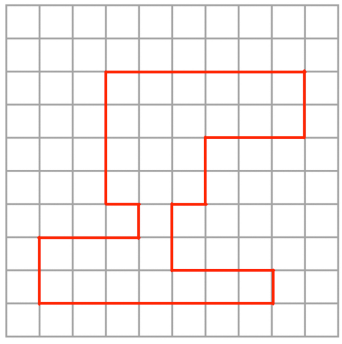


Question 2: The following shapes are drawn on centimetre-squared paper. Find the area of each shape.

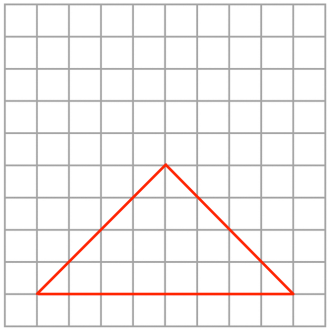
(a)



(b)

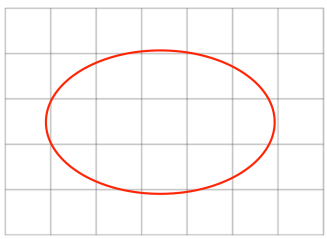


(c)

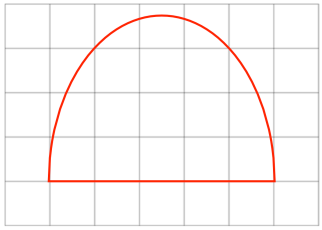


Question 3: The following shapes are drawn on centimetre-squared paper. Estimate their areas.

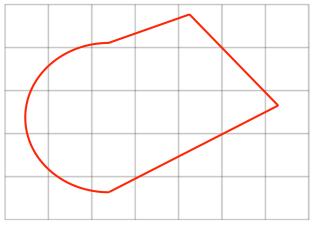
(a)



(b)



(c)

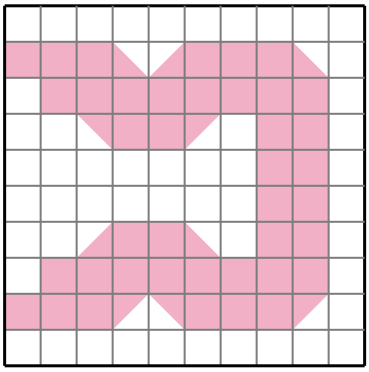


Determining Area with Partial Blocks

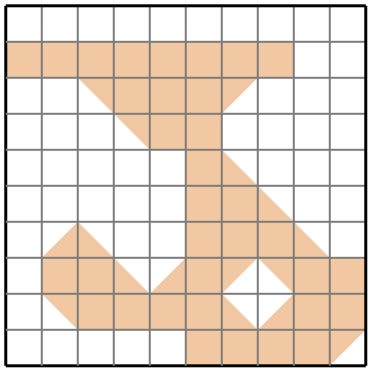
Name:

Find the area of each shaded section. Each block is 1 square unit (u).

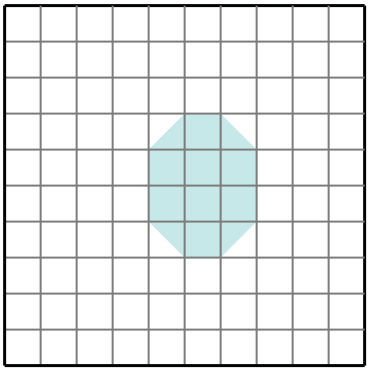
1)



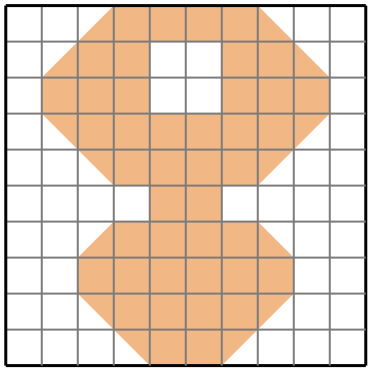
2)



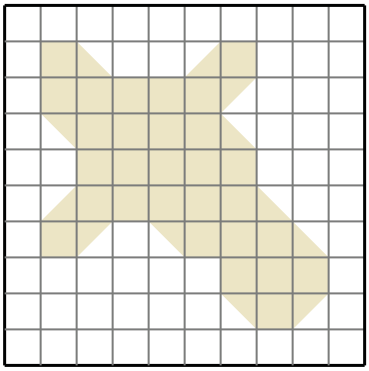
3)



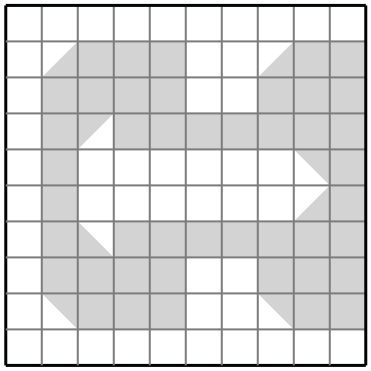
4)



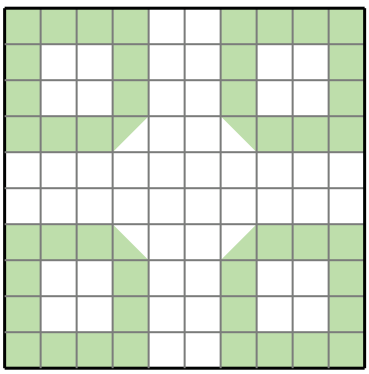
5)



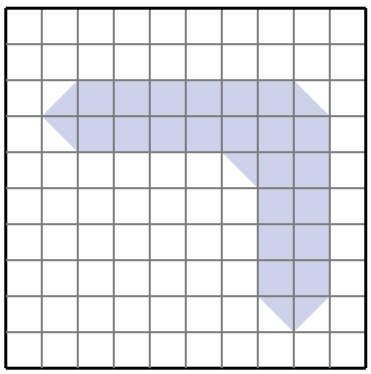
6)



7)



8)



Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

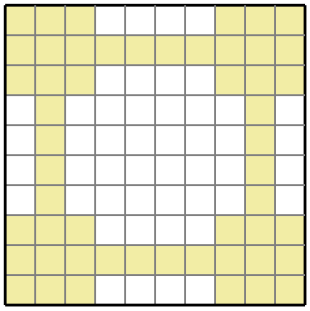
1-8	88	75	63	50	38	25	13	0	

Determining Area with Full Blocks

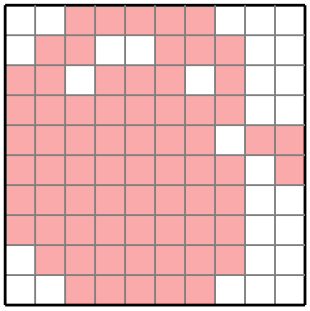
Name:

Find the area of each shaded section. Each block is 1 square unit (u^2).

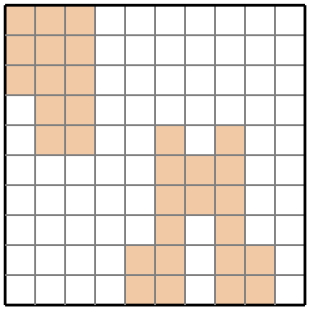
1)



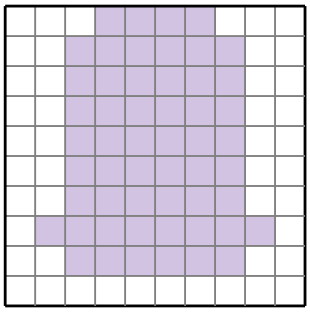
2)



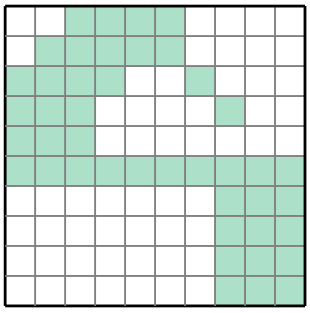
3)



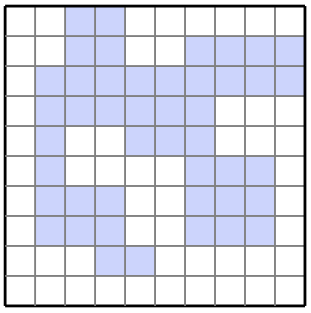
4)



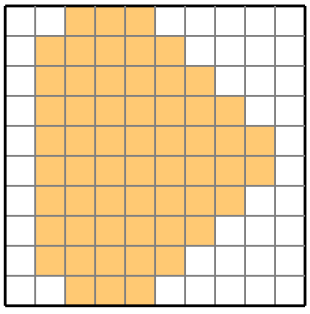
5)



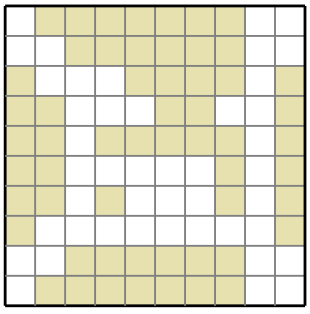
6)



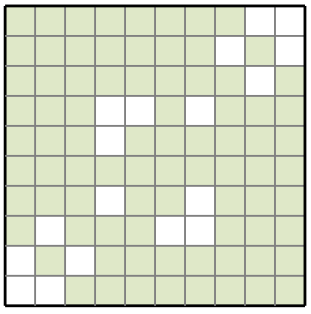
7)



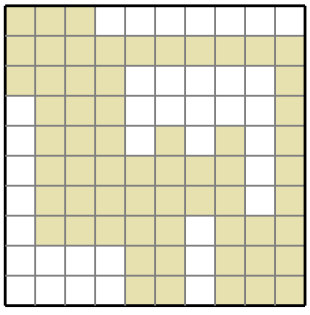
8)



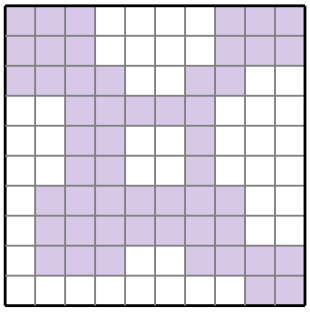
9)



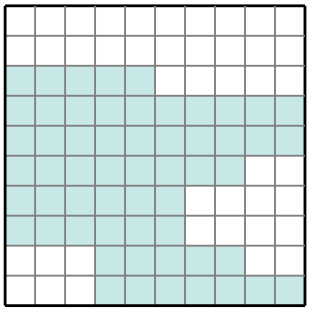
10)



11)



12)



Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

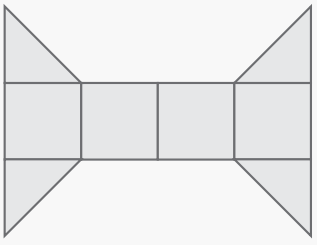
1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								

Finding Area whole and half Units

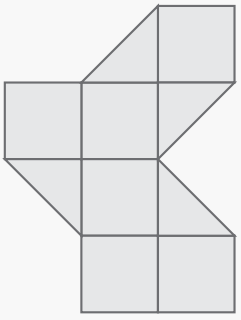
Name: _____ Class: _____

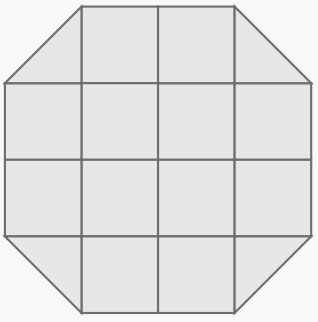
Find the area of the following figures.

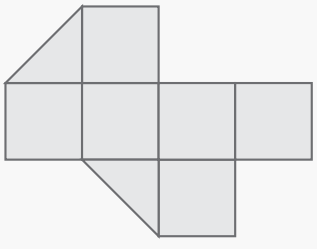
Each  stand for 1 square unit and each  stands for a half square unit.

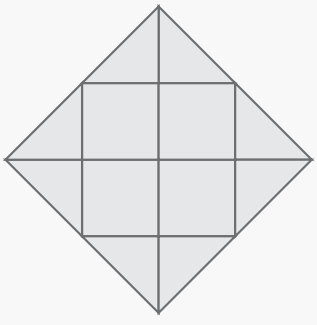


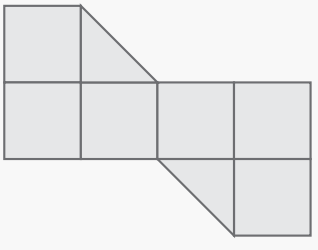
6 square units

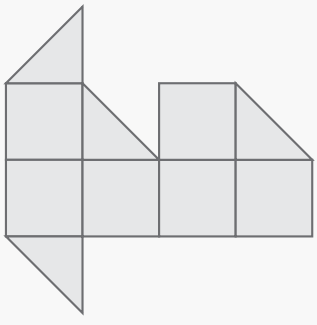


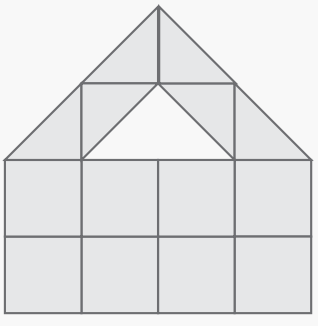


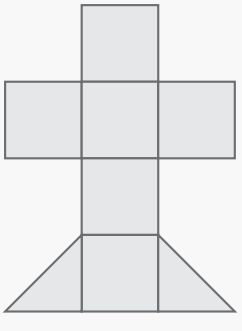








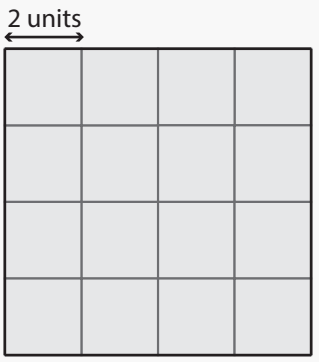




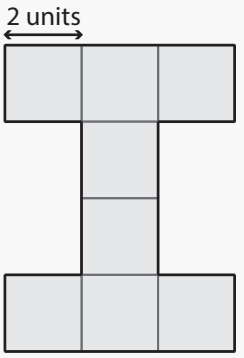
Finding Area

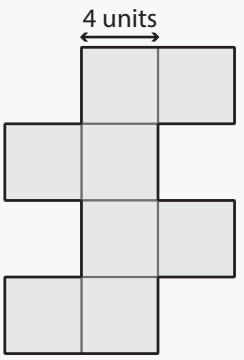
Name: _____ Class: _____

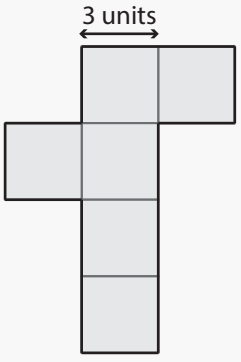
Find the area of the following figures in square units.

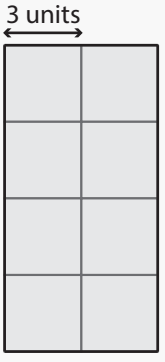


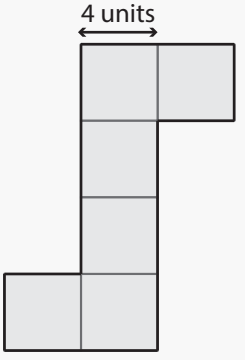
64 square units

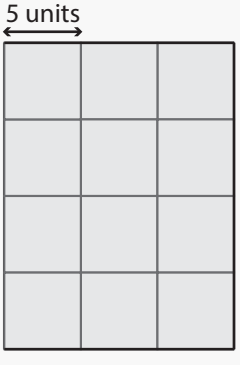


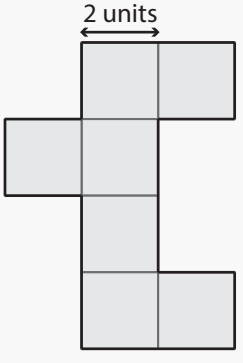


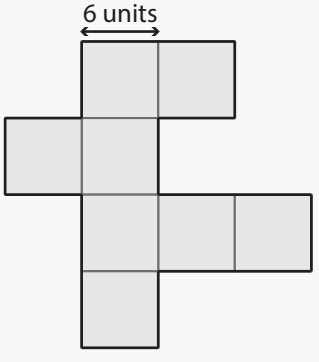












Corbett maths

Area of a Rectangle

Video 45 on Corbettmaths

Examples

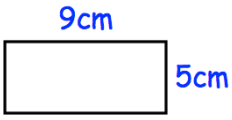
Workout

Click here

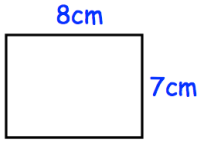
Scan here

Question 1: Calculate the area of each of these rectangles

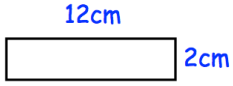
(a)



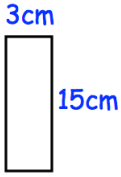
(b)



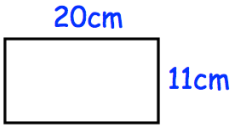
(c)



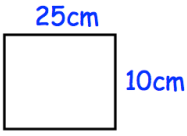
(d)



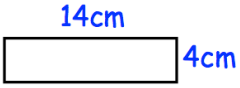
(e)



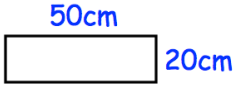
(f)



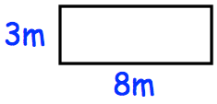
(g)



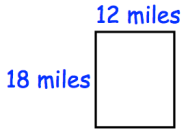
(h)



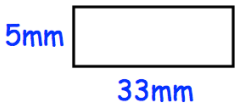
(i)



(j)



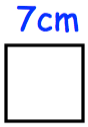
(k)



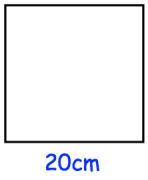
(l)

Question 2: Work out the area of each of these squares

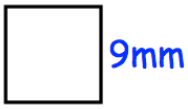
(a)



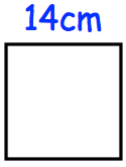
(b)



(c)

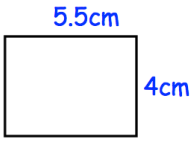


(d)

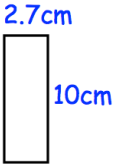


Question 3: Work out the area of each of these rectangles

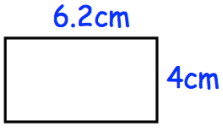
(a)



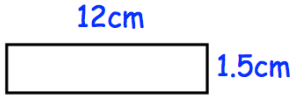
(b)



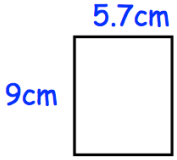
(c)



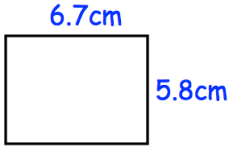
(d)



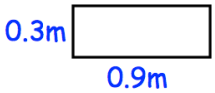
(e)



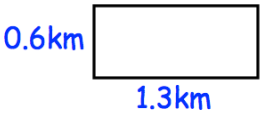
(f)



(g)



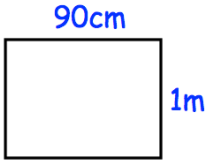
(h)



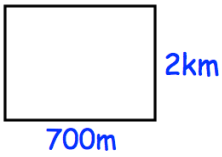
Area of a Rectangle
Video 45 on Corbettmaths

Question 4: Work out the area of each of these rectangles.
State your units for each answer.

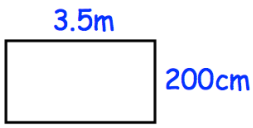
(a)



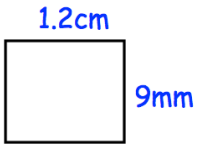
(b)



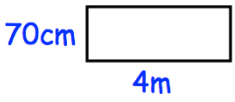
(c)



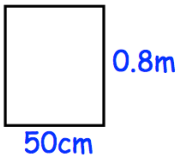
(d)



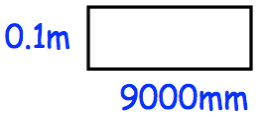
(e)



(f)

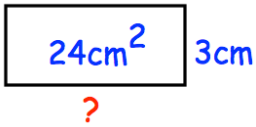


(g)

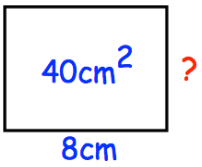


Question 5: The area of each of these rectangles have been given.
Find the length of the missing sides.

(a)

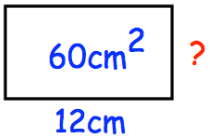


(b)

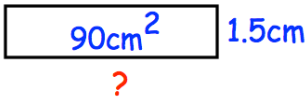


(c)

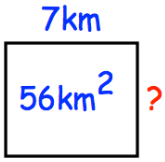
(d)



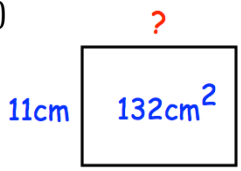
(e)



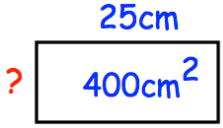
(f)



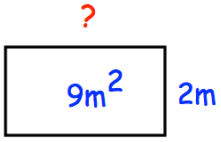
(g)



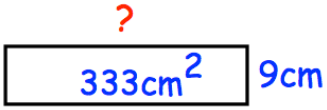
(h)



(i)

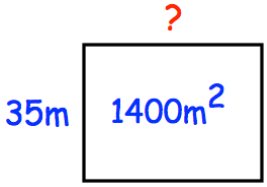


(j)



(k)

(l)



Area and Perimeter

Name: _____ Class: _____

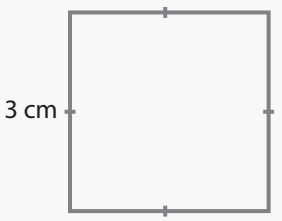
Complete the table

Length	Width	Area	Perimeter
12 m	8 m	_____	_____
10 m	6 m	_____	_____
9 m	5 m	_____	_____
3 m	_____	12 m^2	_____
5 m	_____	25 m^2	_____
_____	3 m	30 m^2	_____
_____	8 m	88 m^2	_____
5 m	_____	_____	24 m
3 m	_____	_____	22 m
15 m	2 m	_____	_____
_____	7 m	28 m^2	_____
_____	8 m	80 m^2	_____
20 m	2 m	_____	_____
_____	_____	15 m^2	16 m
_____	_____	10 m^2	22 m

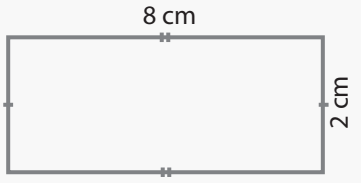
Area of Squares and Rectangles

Name: _____ Class: _____

Find the area of the following squares and rectangles.



area: _____



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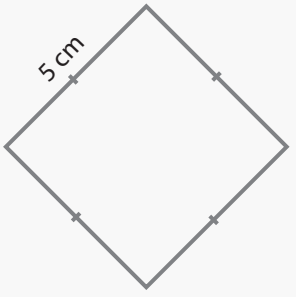

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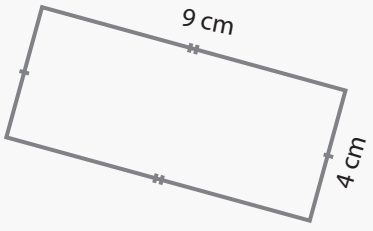

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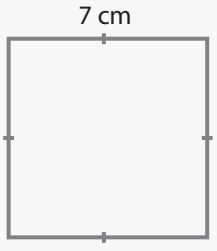

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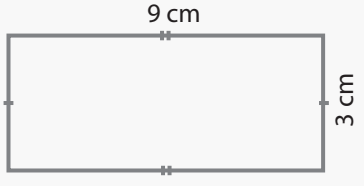

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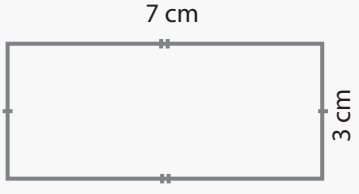

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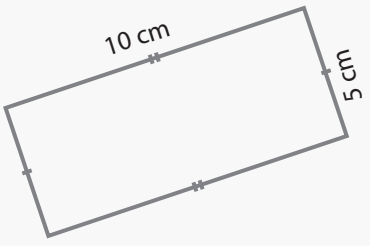

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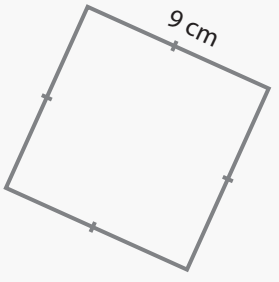


area: _____

Corbett maths

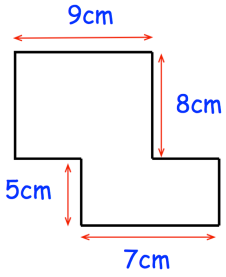
Area of Compound Shapes

Video 41 on www.corbettmaths.com

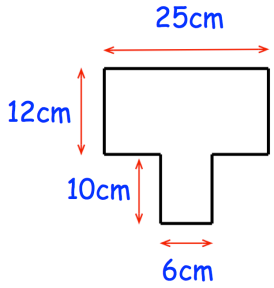
Workout

Question 1: Work out the area of each of these shapes.

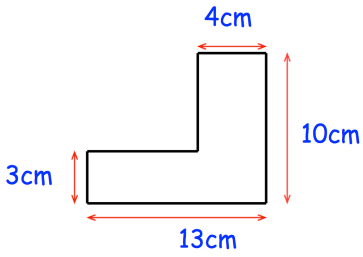
(a)



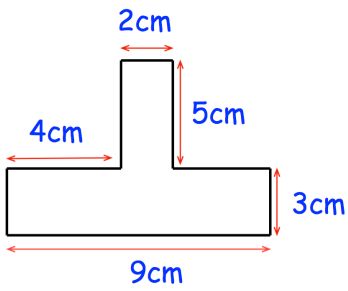
(b)



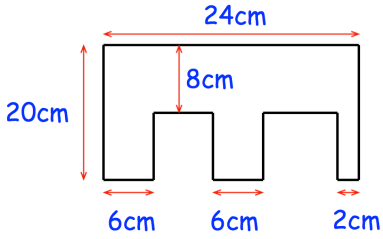
(c)



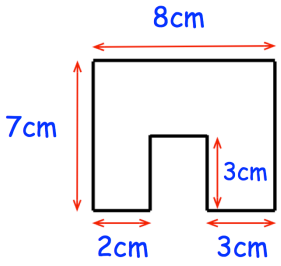
(d)



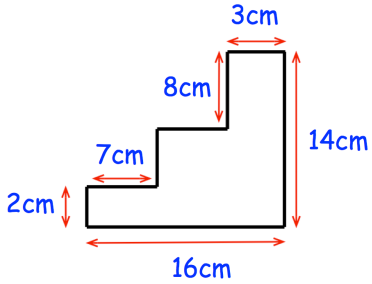
(e)



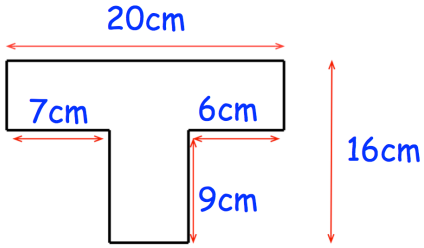
(f)



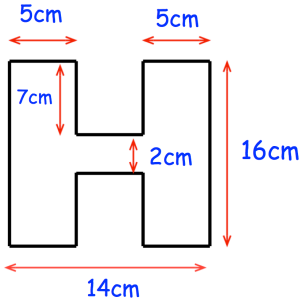
(g)



(h)

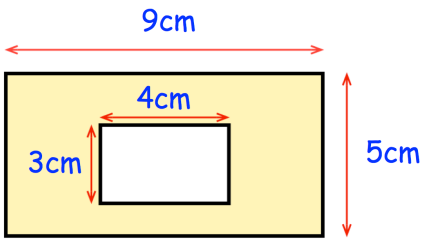


(i)

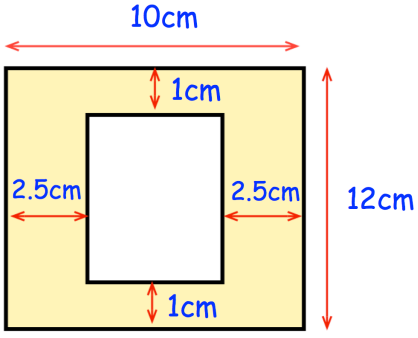


Question 2: Work out the shaded area.

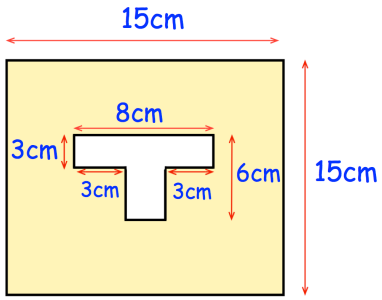
(a)



(b)



(c)



Corbett maths

Area of a Rectangle
Video 45 on Corbettmaths

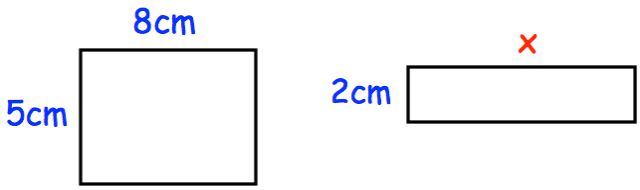
Apply

Question 1: A farmer has a field that is 300m long and 70m wide.
Calculate the area of the field.

Question 2: A piece of paper has a length of 18cm and a width of 6cm.
Find the area of paper.

Question 3: A rectangle has an area of $30cm^2$
Write down the length and width of **three** rectangles with an area of $30cm^2$

Question 4: These two rectangles have the same area.
Find the length of the second rectangle.



Question 5: A rectangle has an area of $80cm^2$ and a perimeter of 48cm.
Find the length and width of the rectangle.

Question 6: A rectangle has an area of $100cm^2$ and a perimeter of 104cm.
Find the length and width of the rectangle.

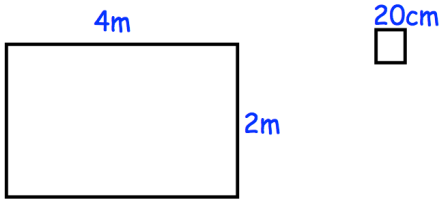
Question 7: Mr Jenkins has a grass lawn that is 24m wide and 30m long.
Mr Jenkins cuts the grass at a rate of $9m^2$ per minute.
How long will it take Mr Jenkins to cut all the grass?

Question 8: A football pitch is 110m long and has a perimeter of 360m.
Find the area of the football pitch.

Question 9: A rectangular room is 14m long and 8m wide.
Jessica is going to carpet the room with carpet that costs £17.50 per square metre.
Work out the cost of carpeting the room.

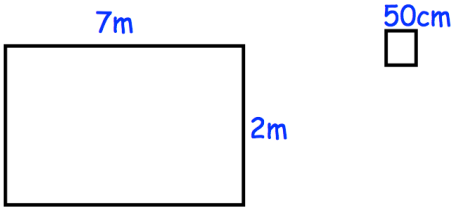
Area of a Rectangle
Video 45 on Corbettmaths

Question 10: Mr Harris is tiling his bathroom floor.
The bathroom floor is a rectangle measuring 4m by 2m.
Each tile is 20cm by 20cm.



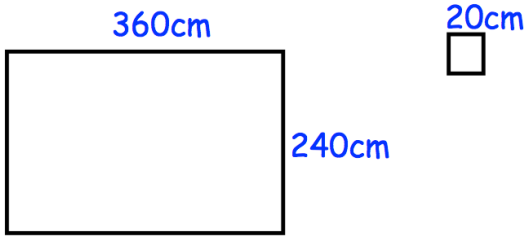
How many tiles does he need?

Question 11: Henry is tiling his kitchen wall.
The kitchen wall is a rectangle measuring 7m by 2m.
Each tile is 50cm by 50cm.



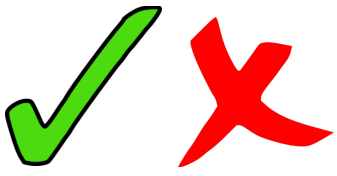
How many tiles does he need?

Question 12: Mrs Rodgers is tiling her bathroom wall.
The bathroom wall is 360cm long and 240cm high.
Each tile is 20cm by 20cm



The tiles are sold in boxes of 6.
Each box costs £8.
How much will it cost Mrs Rodgers to tile her bathroom wall?

Answers



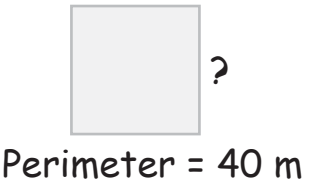
Click here

Scan here

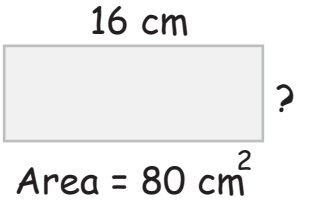
Area and Perimeter

Name: _____ Class: _____

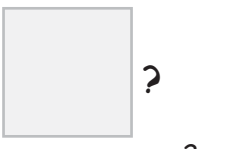
(1) The perimeter of a square is 40 meters.
Find the length of one side of the square.
Answer:



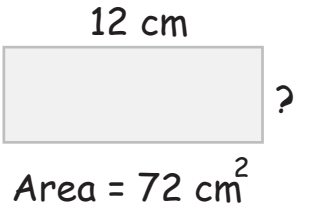
(2) The area of a rectangle is 80 cm^2.
If its length is 16 cm, what is its width?
Answer:



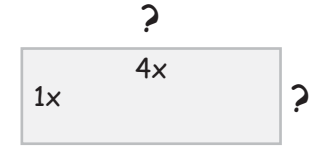
(3) The area of a square is 49 mm^2.
What is the length of each side?
Answer:



(4) The length of a rectangle is 12 cm.
What is the width if the area is 72 cm^2?
Answer:



(5) The perimeter of a rectangle is 160 cm.
The rectangle is 4 times longer than wide.
What are the length and width of this rectangle?
Answer:

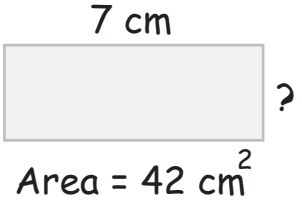


Area and Perimeter

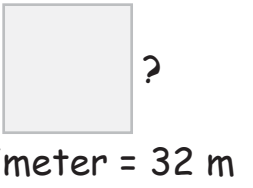
Name: _____ Class: _____

Find the lengths of the unkowns sides.

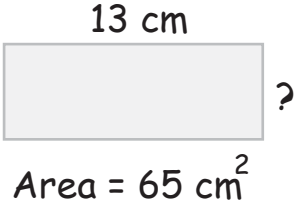
(1) The area of a rectangle is 42 cm^2.
If its length is 7 cm, what is its width?
Answer:



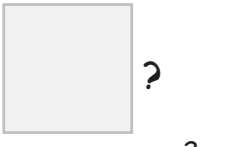
(2) The perimeter of a square is 32 meters.
Find the length of one side of the square.
Answer:



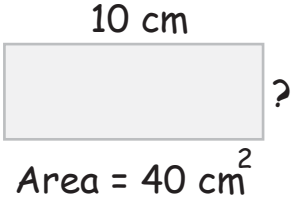
(3) The length of a rectangle is 13 cm.
What is the width if the area is 65 cm^2?
Answer:



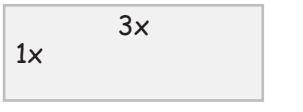
(4) The area of a square is 81 mm^2.
What is the length of each side?
Answer:



(5) The area of a rectangle is 40 cm^2 .
If its length is 10 cm, what is its width?
Answer:



(6) The perimeter of a rectangle is 200 cm.
The rectangle is 3 times longer than wide.
What are the length and width of this rectangle?
Answer:

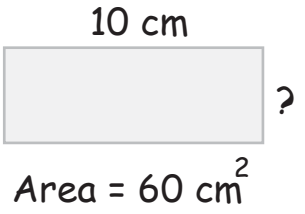


Area and Perimeter

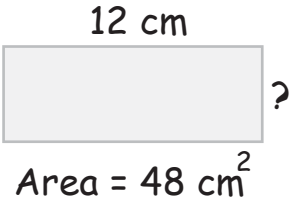
Name: _____ Class: _____

Find the lengths of the unkowns sides.

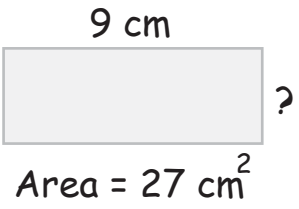
(1) The length of a rectangle is 10 cm.
What is the width if the area is 60 cm^2?
Answer:



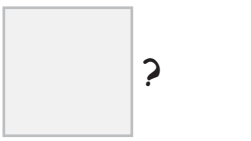
(2) The area of a rectangle is 48 cm^2.
If its length is 12 cm, what is its width?
Answer:



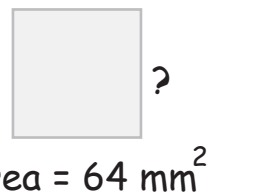
(3) The area of a rectangle is 27 cm^2.
If its length is 9 cm, what is its width?
Answer:



(4) The perimeter of a square is 40 meters.
Find the length of one side of the square.
Answer:



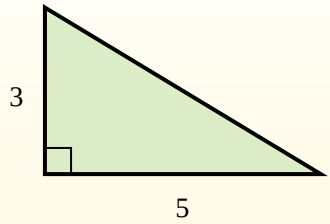
(5) The area of a square is 64 mm^2.
What is the length of each side?
Answer:



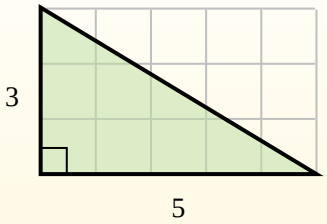
(6) The perimeter of a rectangle is 60 cm.
The rectangle is 5 times longer than wide.
What are the length and width of this rectangle?
Answer:

Find the area of each triangle in blocks (b).

The area of a **right** triangle is half the area of the rectangle that would surround it.

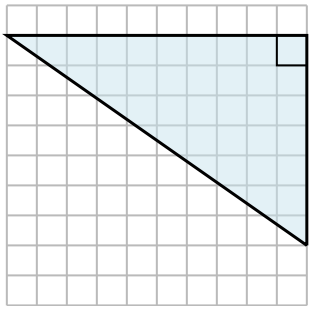


In this example, the surrounding rectangle would have an area of 15 blocks (15 b^2).

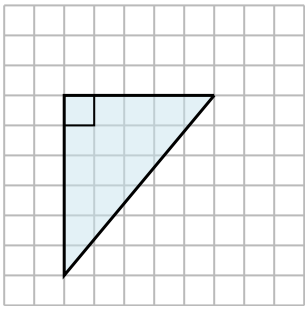


Half of 15 is 7.5
This **right** triangle has an area of 7.5 b^2.

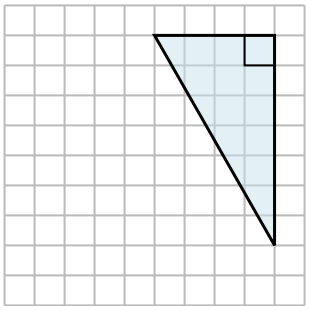
1)



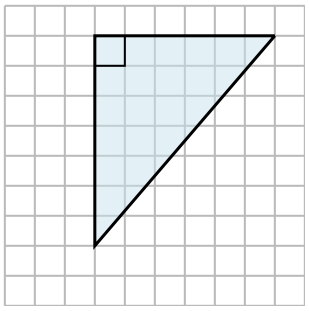
2)



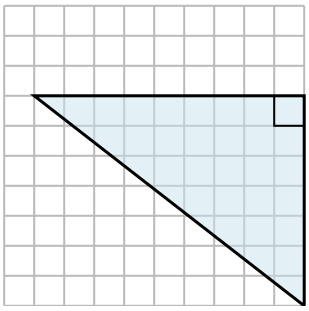
3)



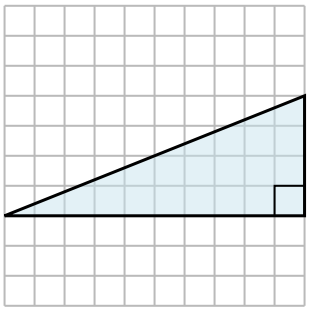
4)



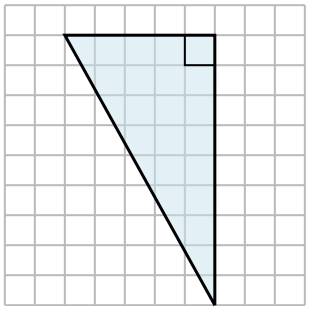
5)



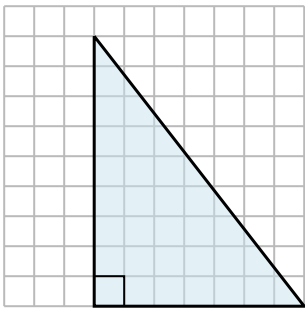
6)



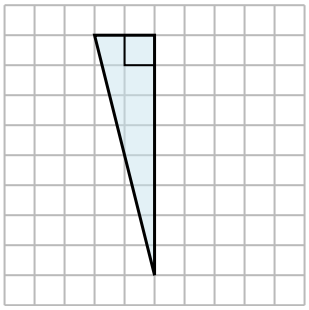
7)



8)



9)



Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

1-9	89	78	67	56	44	33	22	11	0

Corbett maths

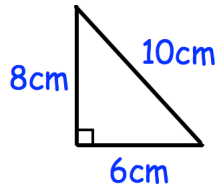
Area of a Triangle

Video 49 on Corbettmaths

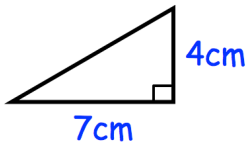
Workout

Question 1: Find the area of each triangle.

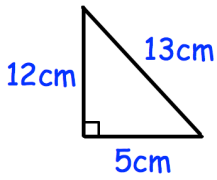
(a)



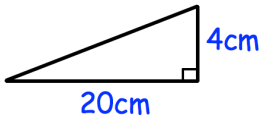
(b)



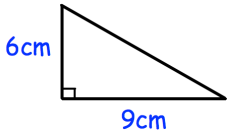
(c)



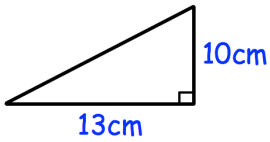
(d)



(e)

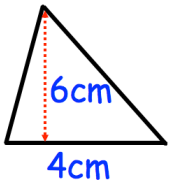


(f)

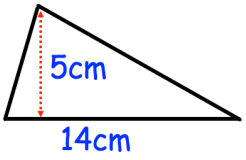


Question 2: Find the area of each triangle.

(a)



(b)



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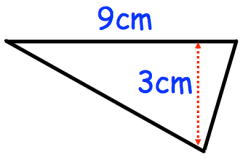
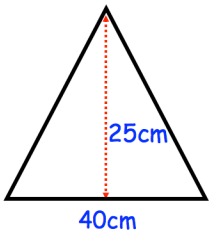
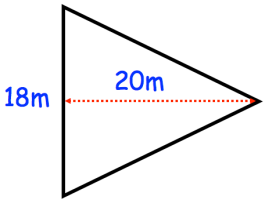


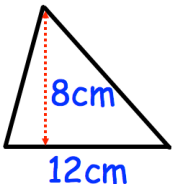
(d)



(e)

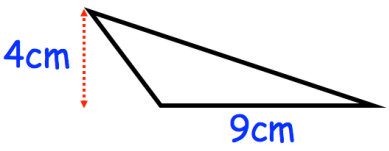


(f)

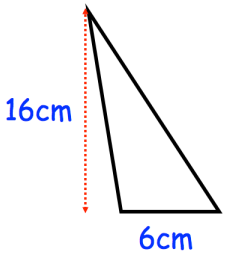


Question 3: Find the area of each triangle.

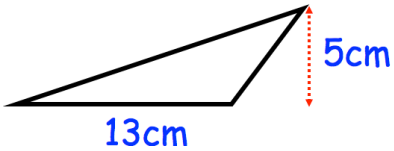
(a)



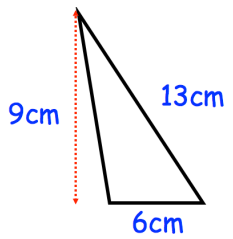
(b)



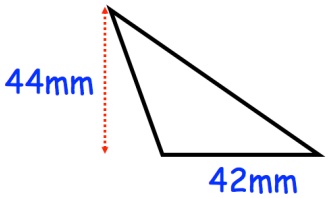
(c)



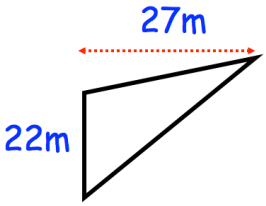
(d)



(e)



(f)



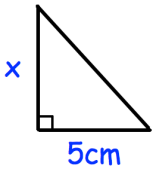
Area of a Triangle
Video 49 on Corbettmaths

Question 4: Find the area of the triangle with a base of 12cm and perpendicular height of 9cm.

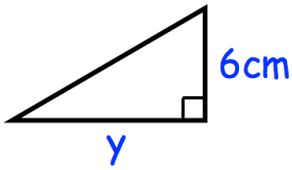
Question 5: Find the area of the triangle with a base of 9cm and perpendicular height of 14cm.

Question 6: Find the area of the triangle with a base of 19cm and perpendicular height of 7cm.

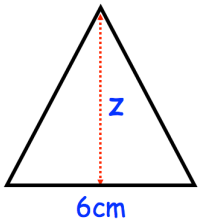
Question 7: The area of the triangle is $20cm^2$, find x.



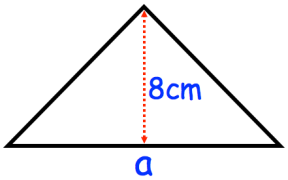
Question 8: The area of the triangle is $30cm^2$, find y.



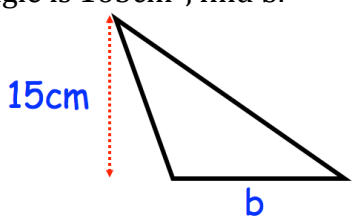
Question 9: The area of the triangle is $12cm^2$, find z.



Question 10: The area of the triangle is $56cm^2$, find a.



Question 11: The area of the triangle is $165cm^2$, find b.



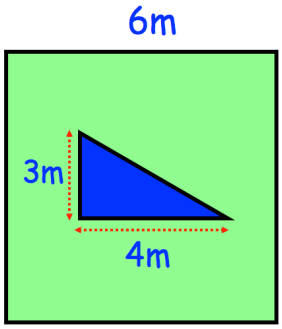
Corbett maths

Area of a Triangle

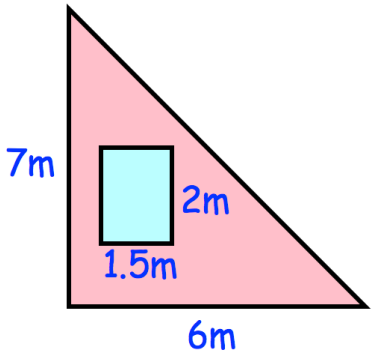
Video 49 on Corbettmaths

Apply

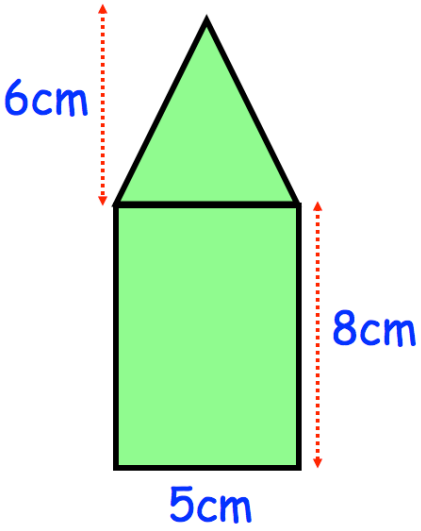
Question 1: Shown is a square garden with a triangular pond.
Find the area of the garden that is grass.



Question 2: Shown is a triangular brick wall with a rectangular window.
Find the area of the wall that is brick.

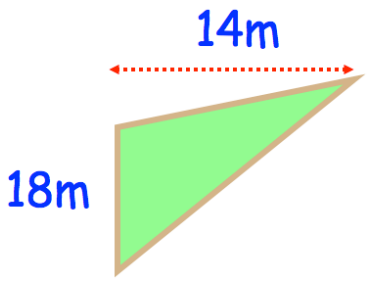


Question 3: Shown is a pattern that is made from a rectangle and a triangle.
Find the area of the pattern.

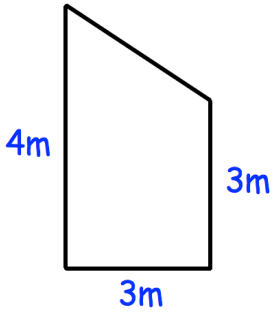


Area of a Triangle
Video 49 on Corbettmaths

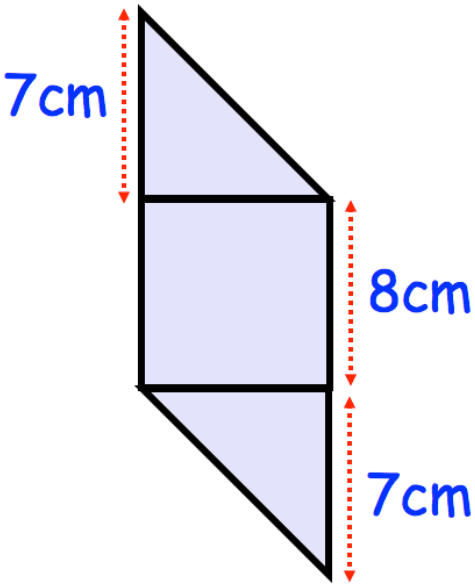
Question 4: Shown below is a triangular field.
Each chicken requires $3m^2$.
How many chickens can be kept in this field?



Question 5: Shown below is a wall.
Calculate the area of the wall.



Question 6: Shown below is a logo made from a square and two triangles.
Calculate the area of the logo.

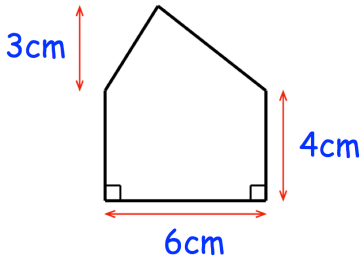


Area of Compound Shapes

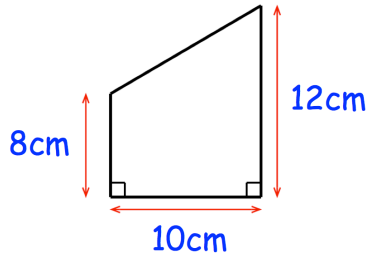
Video 41 on www.corbettmaths.com

Question 3: Work out the area of each of these shapes.

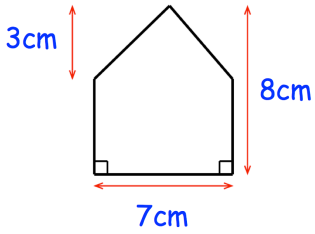
(a)



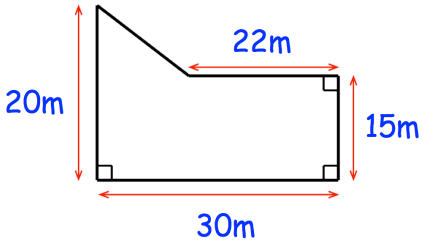
(b)



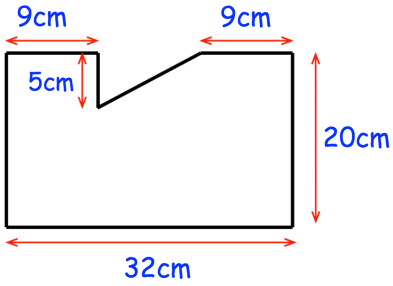
(c)



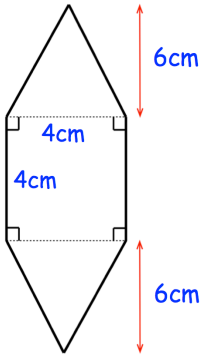
(d)



(e)

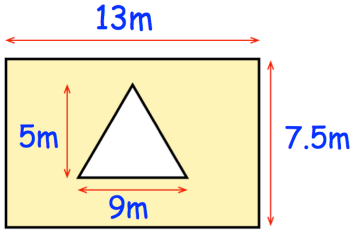


(f)

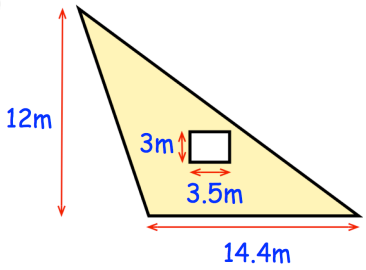


Question 4: Work out the shaded area.

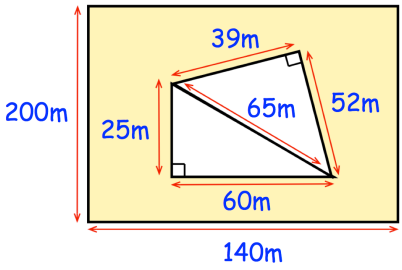
(a)



(b)

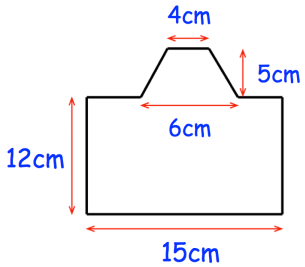


(c)

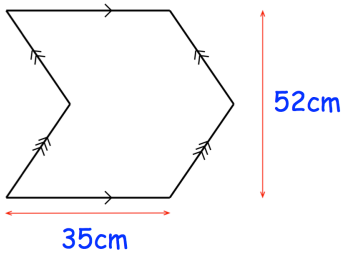


Question 5: Work out the area of each of these shapes.

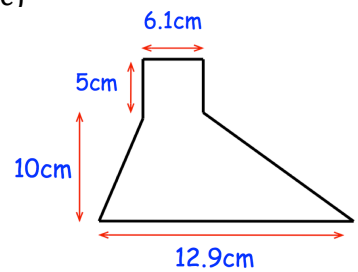
(a)



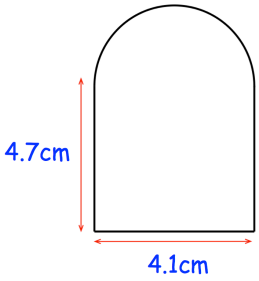
(b)



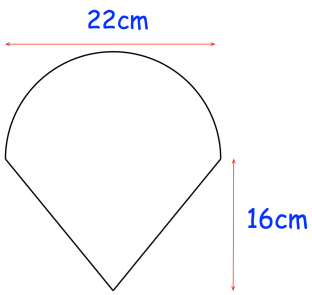
(c)



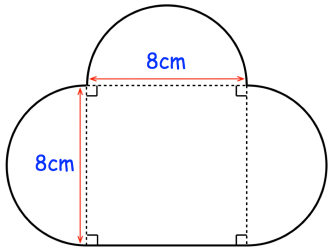
(d)



(e)



(f)

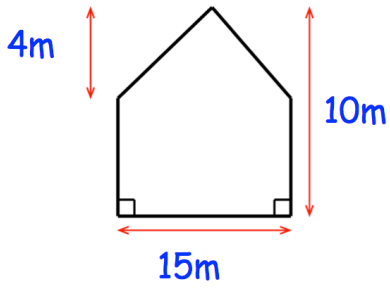


Area of Compound Shapes

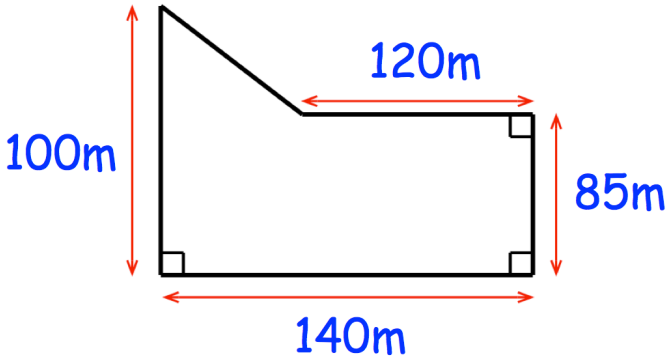
Video 41 on www.corbettmaths.com

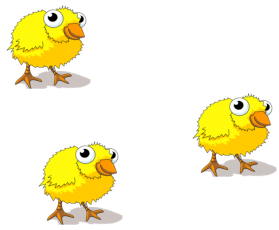
Apply

Question 1: William is painting the side of his house.
He has 8 litres of paint and each litre of paint covers $16m^2$
Does William have enough paint?



Question 2: Farmer Martin keeps chickens in the field below.
Each chicken needs $3m^2$.
What is the maximum number of chickens that he can keep?

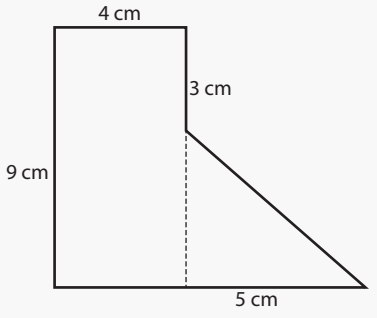




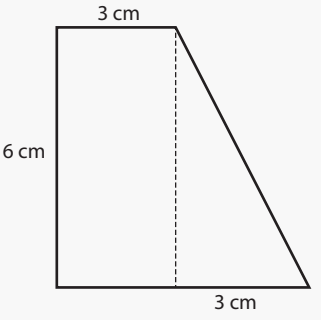
Area of Compound Shapes

Name: _____ Class: _____

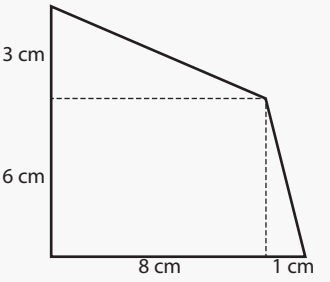
Find the area of the following compound shapes (not drawn to scale).
The dashed lines are perpendicular.



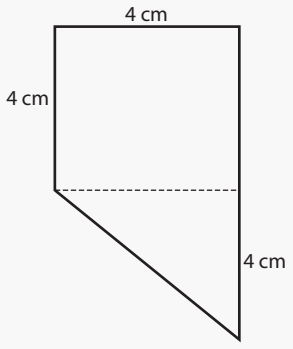
Area: _____



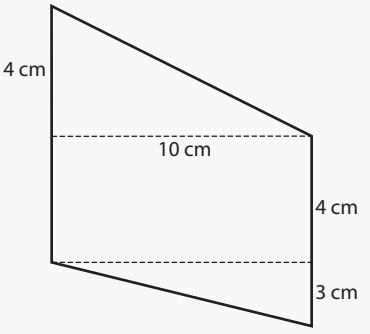
Area: _____



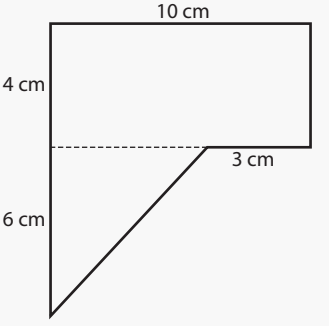
Area: _____



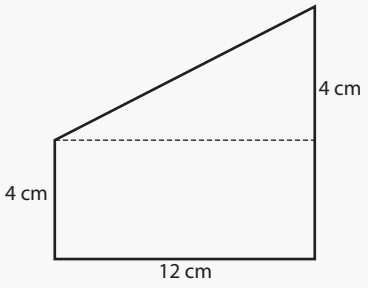
Area: _____



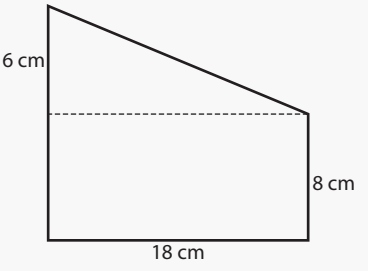
Area: _____



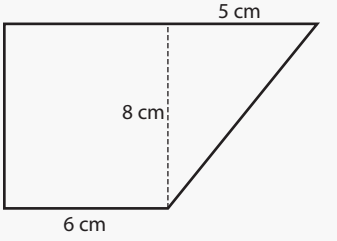
Area: _____



Area: _____



Area: _____

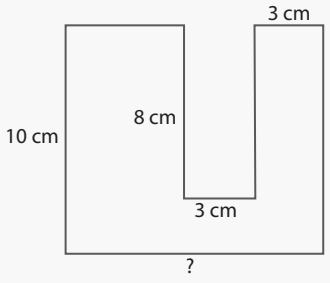


Area: _____

Length of the Unknown Side

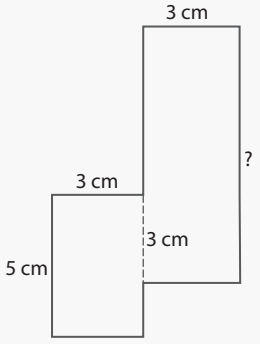
Name: _____ Class: _____

What is the length of the unknown sides (?) given the perimeter of the following shapes? The shapes are not drawn to scale



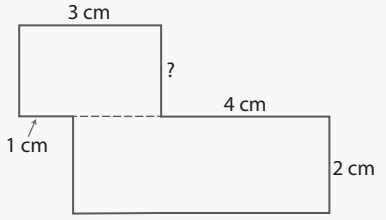
Perimeter: 60 cm

Length of ? : _____



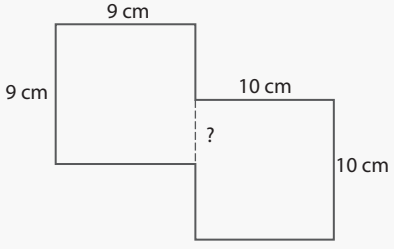
Perimeter: 36 cm

Length of ? : _____



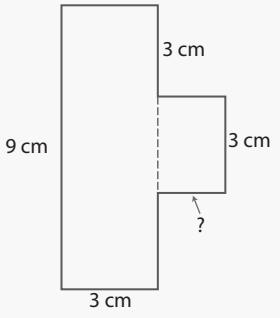
Perimeter: 22 cm

Length of ? : _____



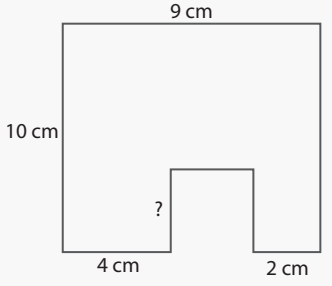
Perimeter: 68 cm

Length of ? : _____



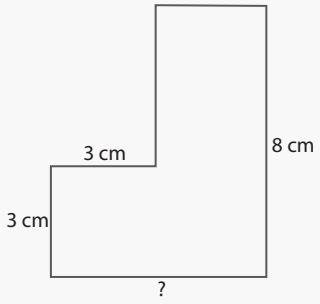
Perimeter: 28 cm

Length of ? : _____



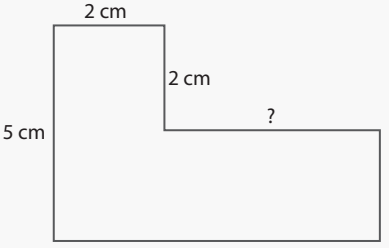
Perimeter: 44 cm

Length of ? : _____



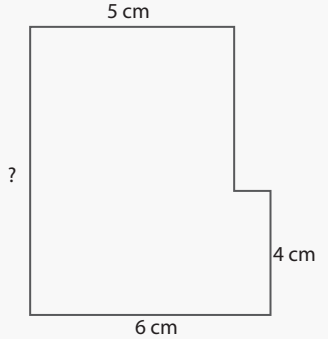
Perimeter: 28 cm

Length of ? : _____



Perimeter: 24 cm

Length of ? : _____



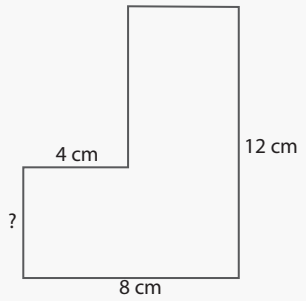
Perimeter: 30 cm

Length of ? : _____

Unknown Length

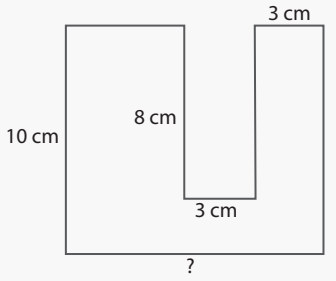
Name: _____ Class: _____

Find the length of the unknown (?) sides of the following compound shapes (not drawn to scale) given their areas.



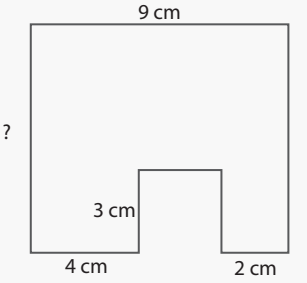
Area: 68 cm^2

Length of ?: _____



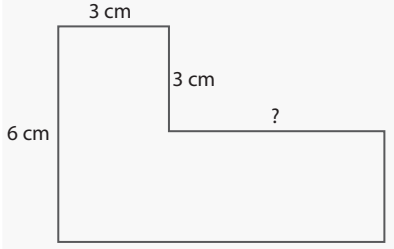
Area: 96 cm^2

Length of ?: _____



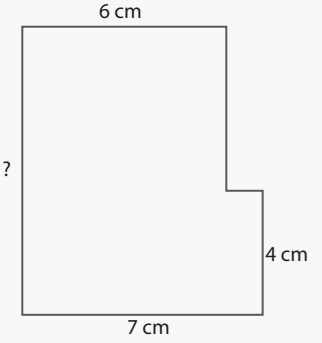
Area: 81 cm^2

Length of ?: _____



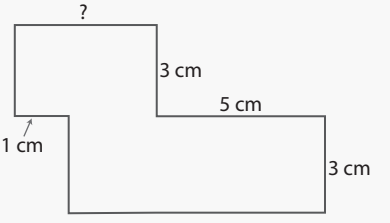
Area: 36 cm^2

Length of ?: _____



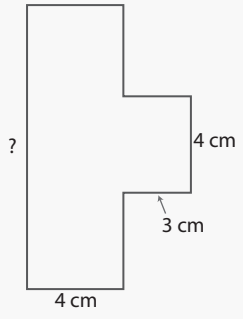
Area: 64 cm^2

Length of ?: _____



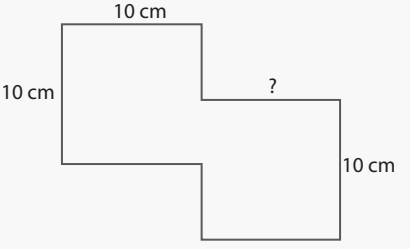
Area: 36 cm^2

Length of ?: _____



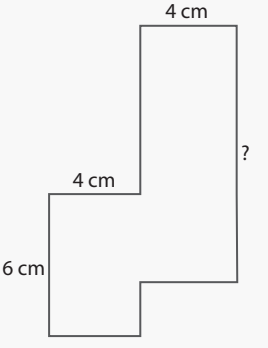
Area: 60 cm^2

Length of ?: _____



Area: 200 cm^2

Length of ?: _____



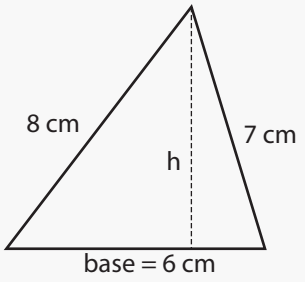
Area: 68 cm^2

Length of ?: _____

Height of Triangles

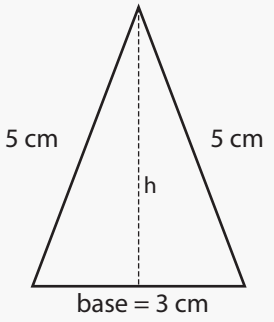
Name: _____ Class: _____

Find the height of the following triangles (not drawn to scale).



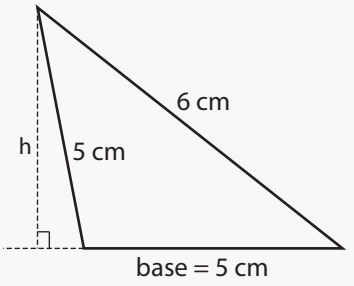
Area: 18 cm^2

Height: _____



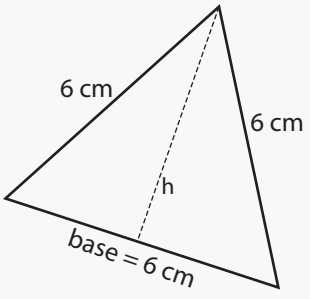
Area: 6 cm^2

Height: _____



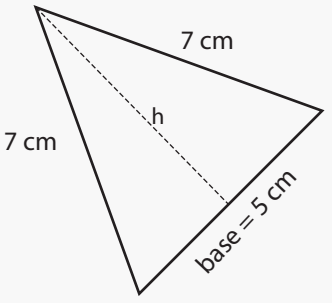
Area: 10 cm^2

Height: _____



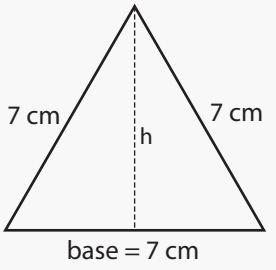
Area: 15 cm^2

Height: _____



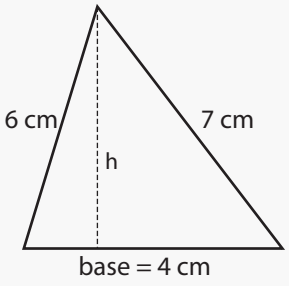
Area: 15 cm^2

Height: _____



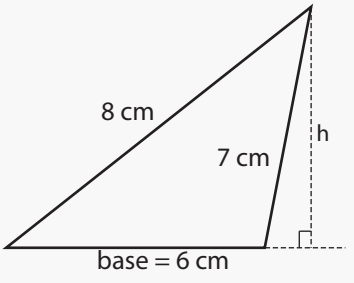
Area: 21 cm^2

Height: _____



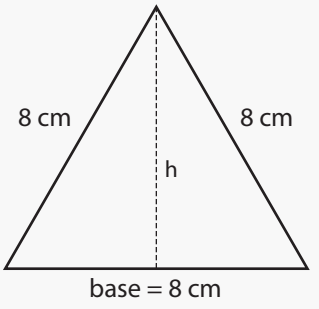
Area: 10 cm^2

Height: _____



Area: 18 cm^2

Height: _____



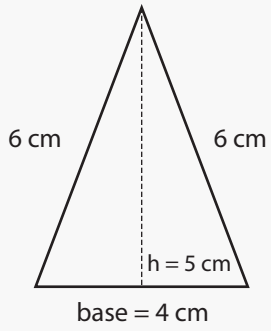
Area: 28 cm^2

Height: _____

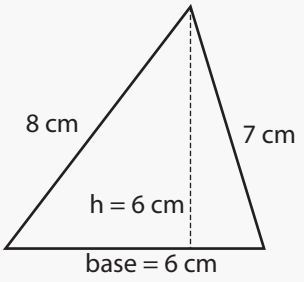
Area of Triangles

Name: _____ Class: _____

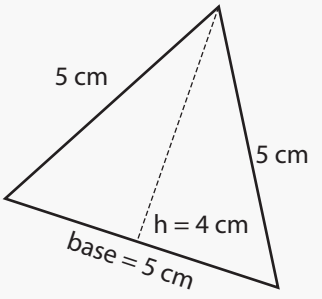
Find the area of the following triangles (not drawn to scale).



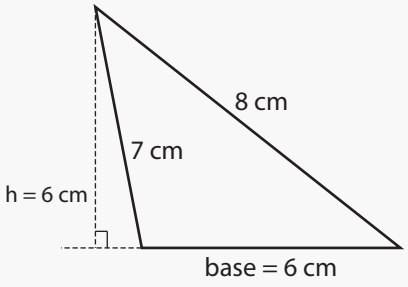
Area: _____



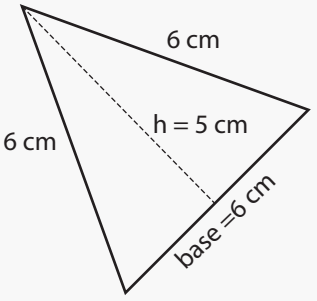
Area: _____



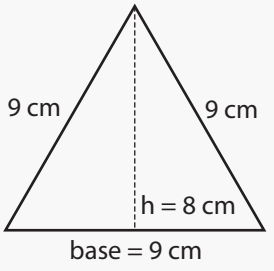
Area: _____



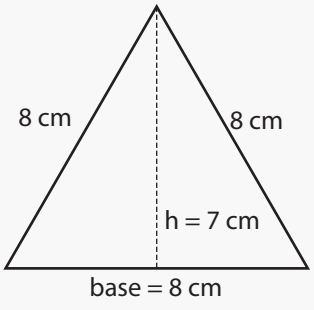
Area: _____



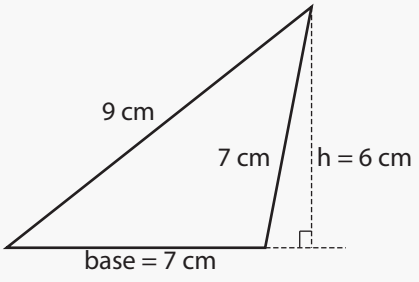
Area: _____



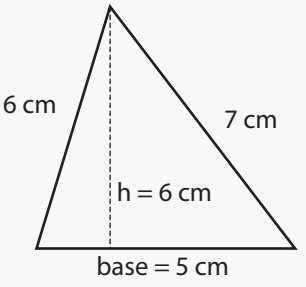
Area: _____



Area: _____



Area: _____



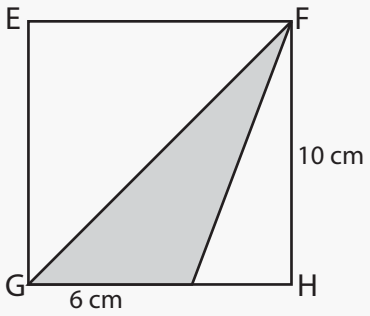
Area: _____

Area of Shaded Triangles

Name: _____ Class: _____

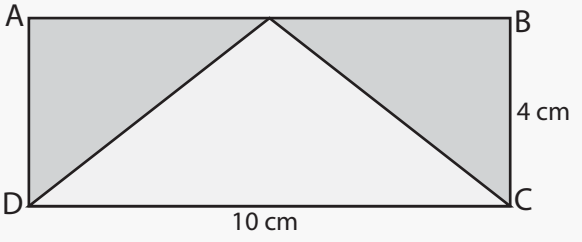
Calculate the area of each shaded triangle.

EFGH is a square



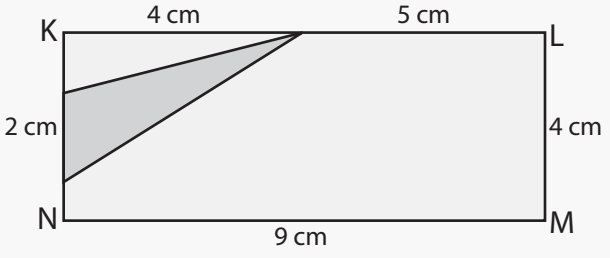
Area: _____

ABCD is a rectangle



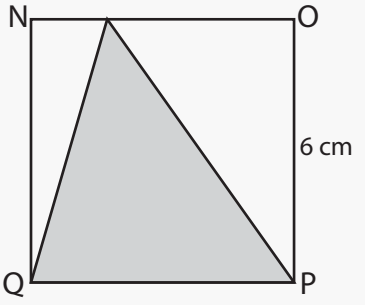
Area: _____

KLMN is a rectangle



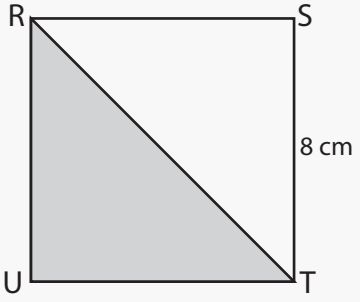
Area: _____

NOPQ is a square



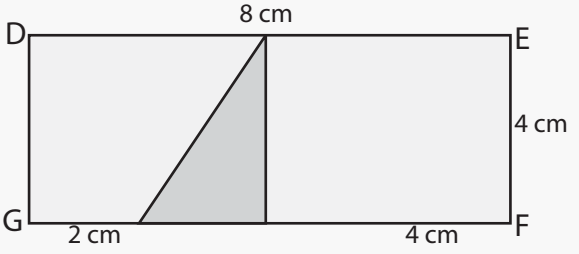
Area: _____

RSTU is a square



Area: _____

DEFG is a rectangle

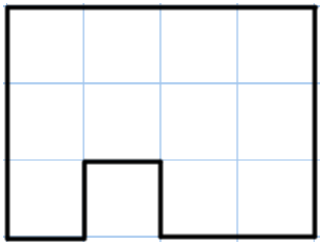


Area: _____

Area of 2D Shapes

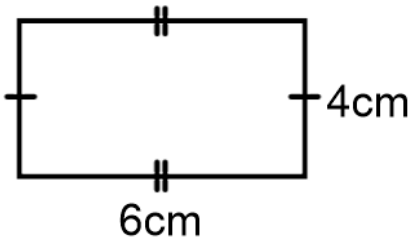
Increasingly Difficult Exercises

a)

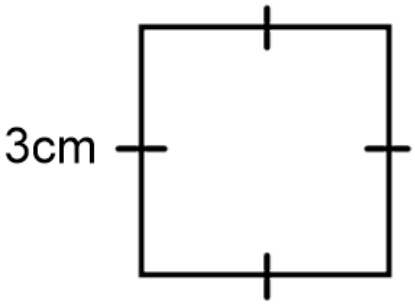


b)

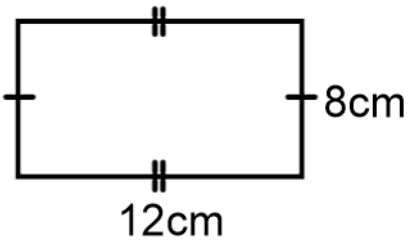
c)



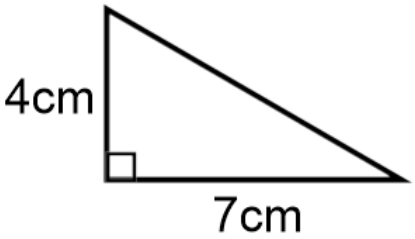
d)



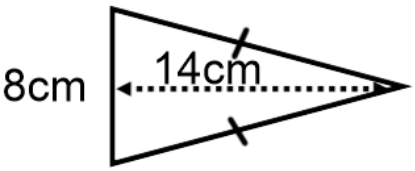
e)



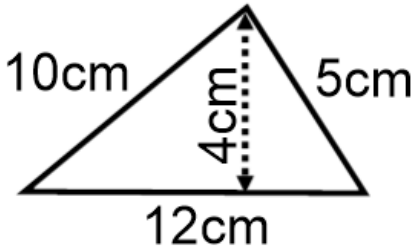
f)



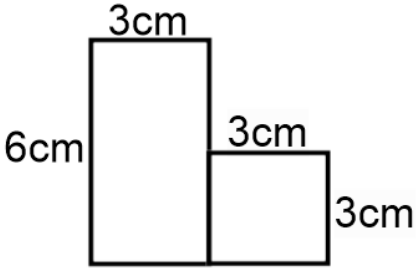
g)



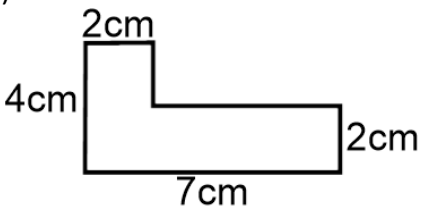
h)



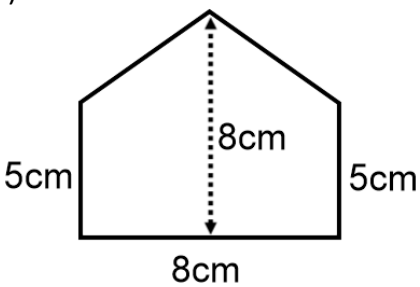
i)



j)



k)



l)