Area or Perimeter?

That is the question!

How to find area and perimeter of irregular shapes..

Created by Danielle Miller, Hawk Ridge
Math Facilitator

Area

- The number of **square units** needed to cover the region inside a figure.
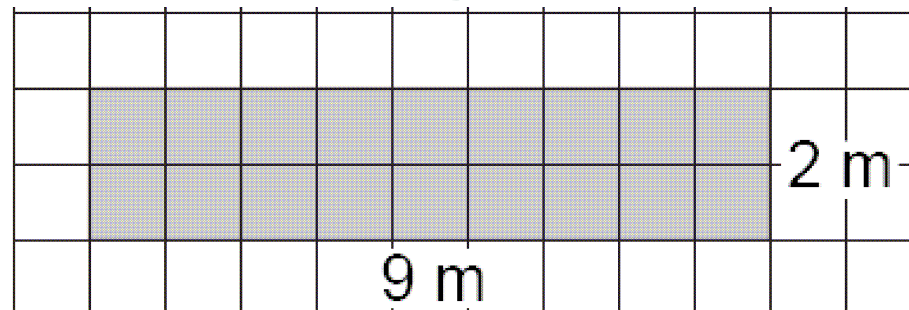
There are 40 squares covering the inside of the figure.

5 ft

8 ft

- Area is always measured in **square units**!

Area

- To calculate the area of a regular figure use the formula:

Area = Length x Width


Area = 9m x 2m

Area = 18 square meters
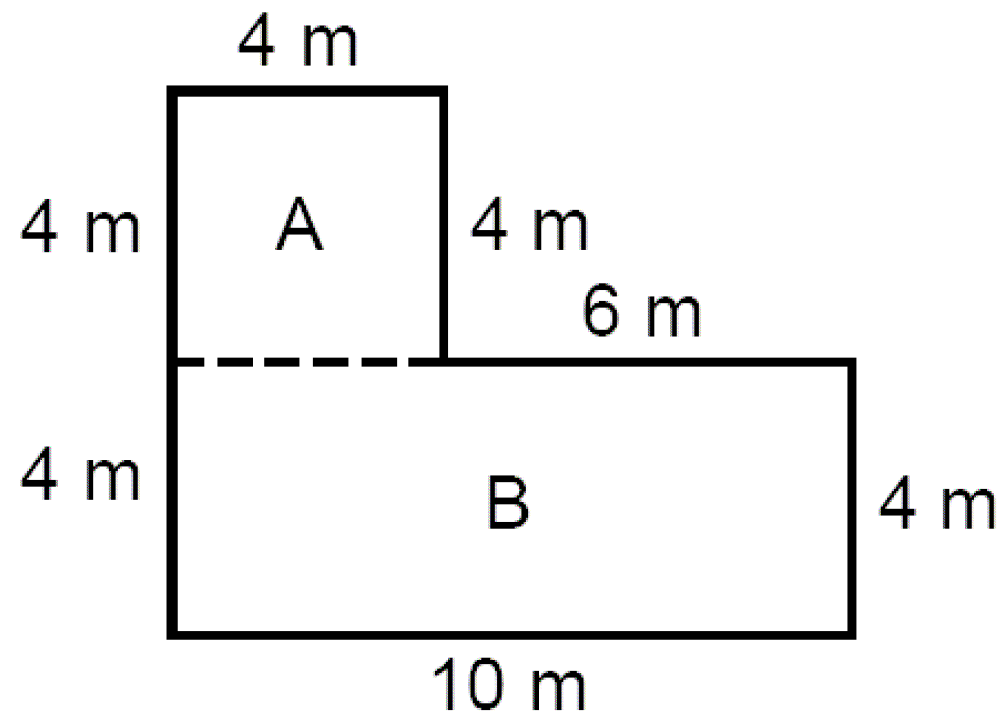
Area

To calculate the area of an irregular figure, follow these steps:

1. Divide the irregular figure into regular figures.

2. Look for missing measurements that you will need to find the area of each new regular figure.

3. Find the area of every regular figure.

4. Add the areas of each regular figure together to find the total area.

Step 1:

Divide the irregular figure into regular figures.

4 m

4 m   A   4 m

6 m

4 m   B   4 m

10 m
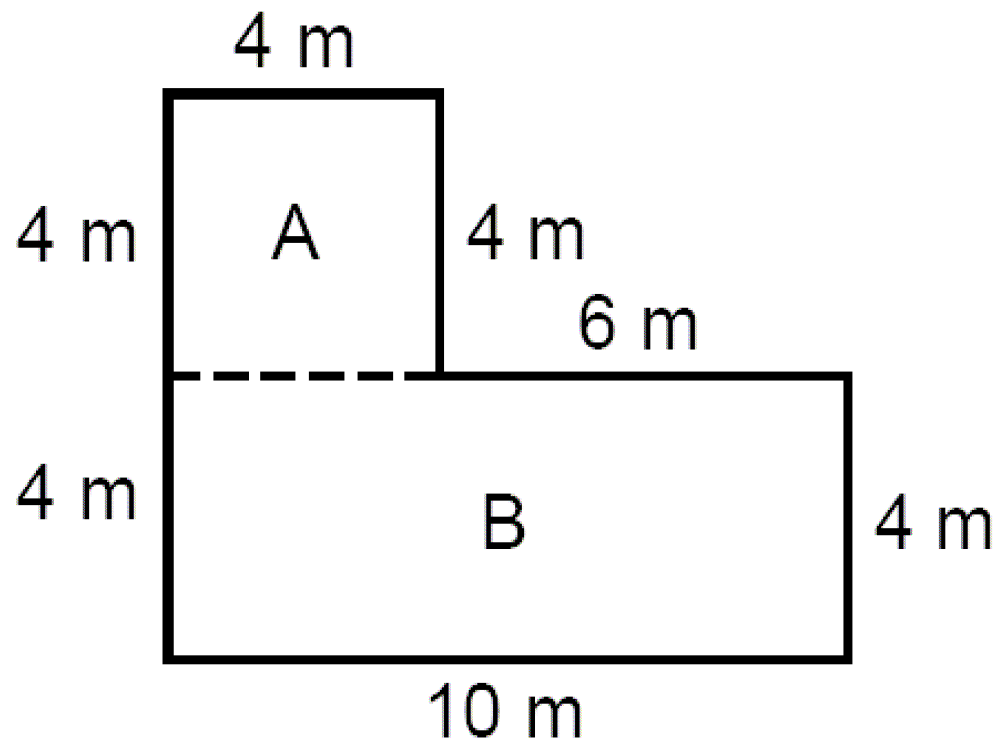
Step 2:

Look for missing measurements that you will need to find the area of each new regular figure.

This side was 8m but because you split it to make two regular rectangles, look carefully at every side of the figure to see what the new measurements will be!

Don't forget the rule, opposite sides are equal!

This will help you find the missing measurements!

4 m

4 m   A   4 m

6 m

4 m   B   4 m

10 m

Step 3:
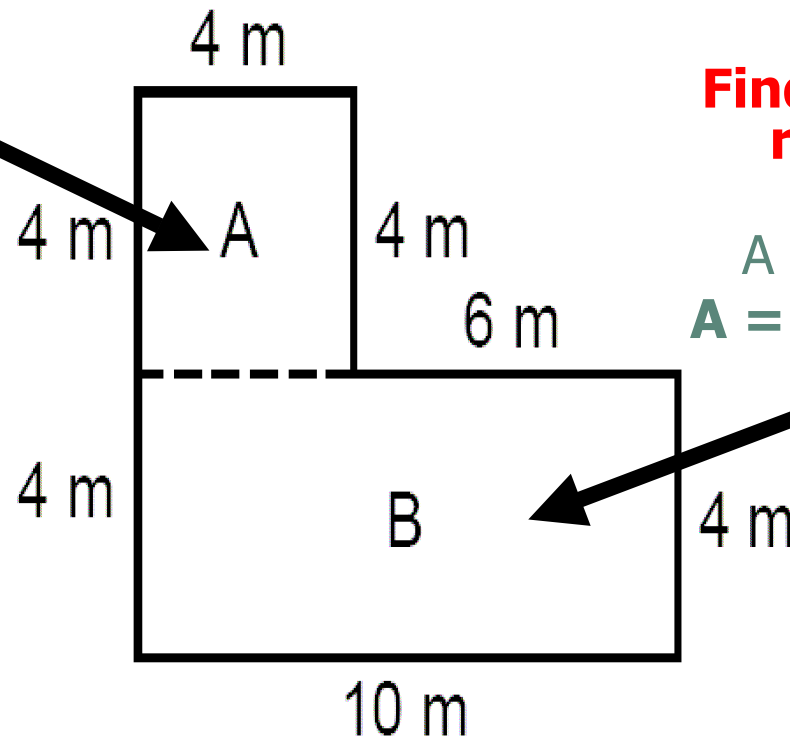
Find the area of every regular figure.

Find the area of rectangle "A"

A= L x W

A = 4m x 4m

A = 16 square m

4 m

4 m   A   4 m

6 m

Find the area of rectangle "B"

A= L x W

A = 10m x 4m

A = 40 square m

4 m   B   4 m

10 m

Step 4:
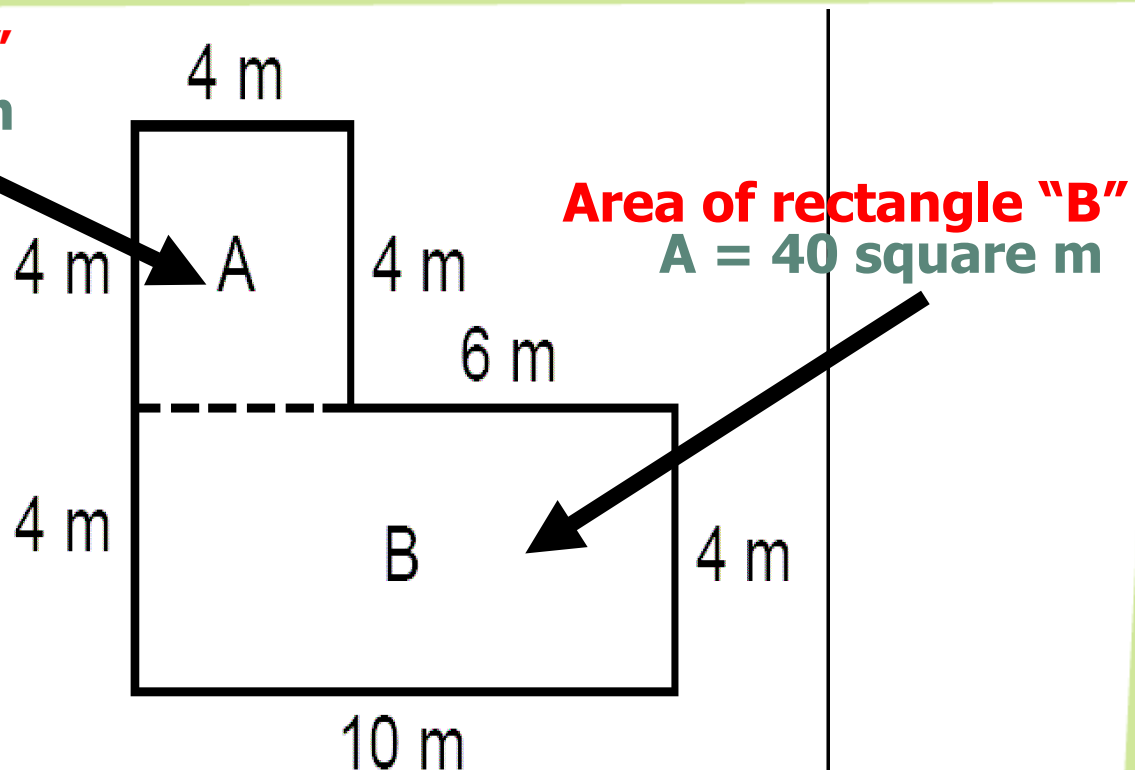
Add the areas of every regular figure.

Area of rectangle "A"
A = 16 square m

4 m

4 m   A   4 m

6 m
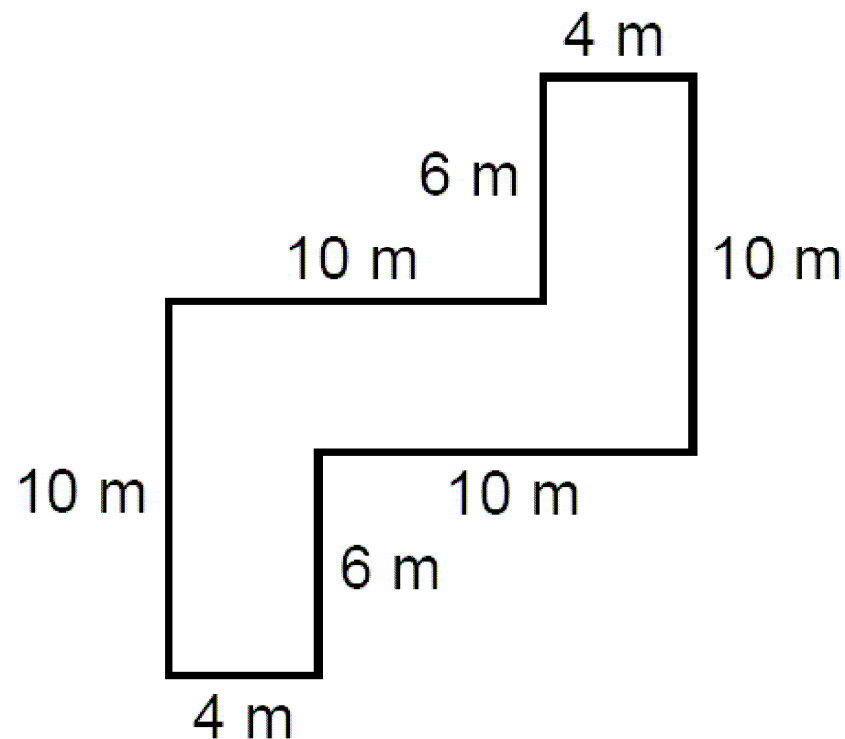
Area of rectangle "B"
A = 40 square m

40 square m
+ 16 square m
56 square m

4 m   B   4 m

The total area is
56 square m.

10 m
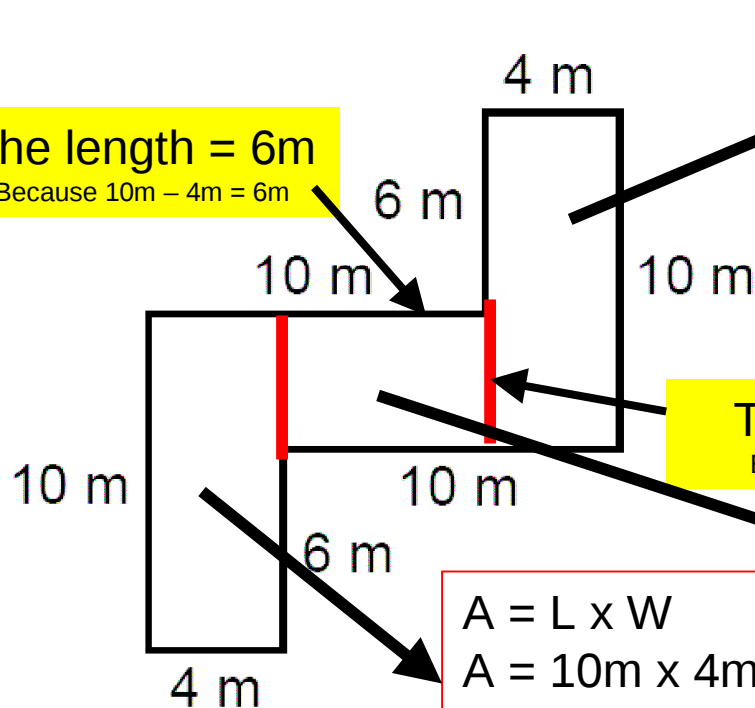
Now You Try!
Find the area of this figure:

4 m

6 m

10 m

10 m

10 m

10 m

6 m

10 m

4 m

Work it out like this...

The length = 6m
Because 10m – 4m = 6m
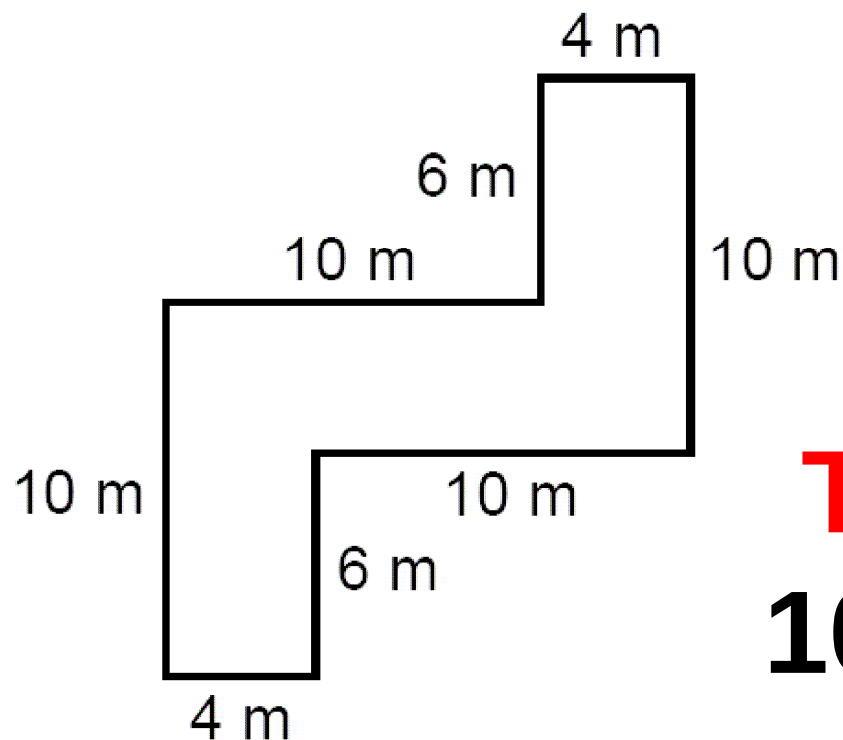
The width = 4m
Because 10m – 6m = 4m

4 m

6 m

10 m

10 m

10 m

10 m

6 m

4 m

A = L x W
A = 10m x 4m
A = 40 square m

A = L x W
A = 10m x 4m
A = 40 square m

A = L x W
A = 6m x 4m
A = 24 square m

Did you get the right answer?

4 m

6 m

10 m

10 m

10 m

10 m

6 m

4 m
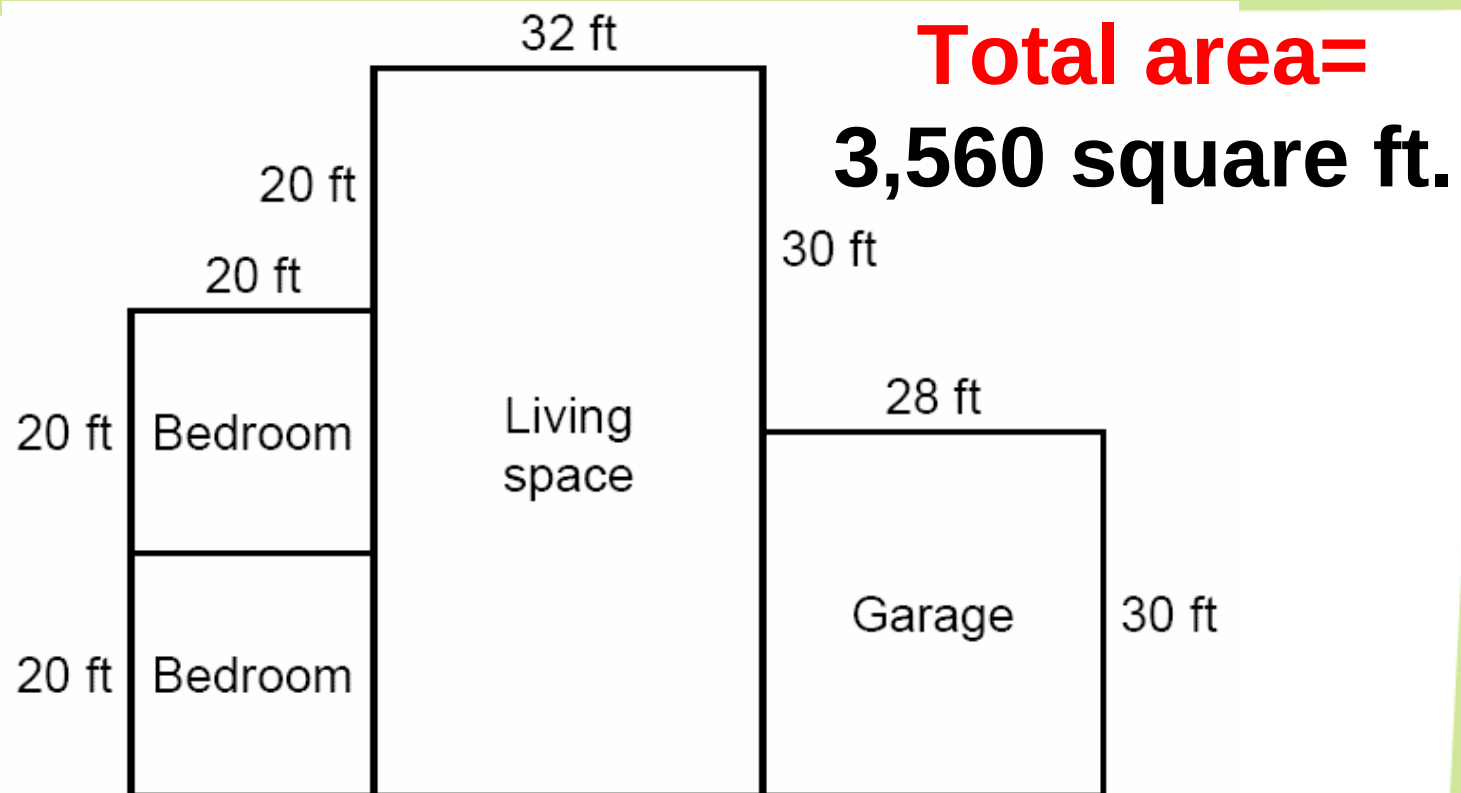
Total Area=

104 square m

Try another one...

32 ft

20 ft

20 ft

30 ft

Bedroom

20 ft

Living space

28 ft

Bedroom

20 ft

Garage

30 ft

Did you get the right answer?

Total area=
3,560 square ft.

32 ft
20 ft
20 ft
30 ft
20 ft | Bedroom
Living space
28 ft
30 ft
20 ft | Bedroom
Garage
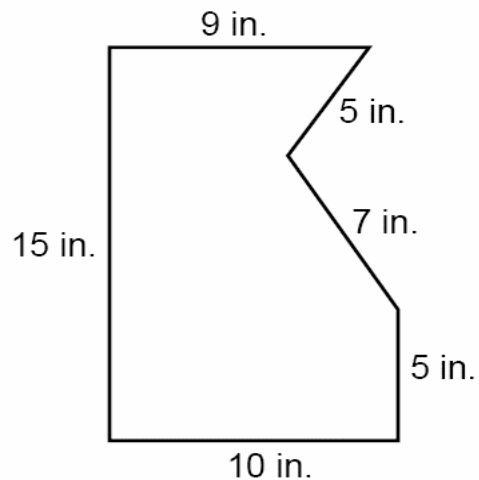
Perimeter

- The distance <u>around</u> a figure.
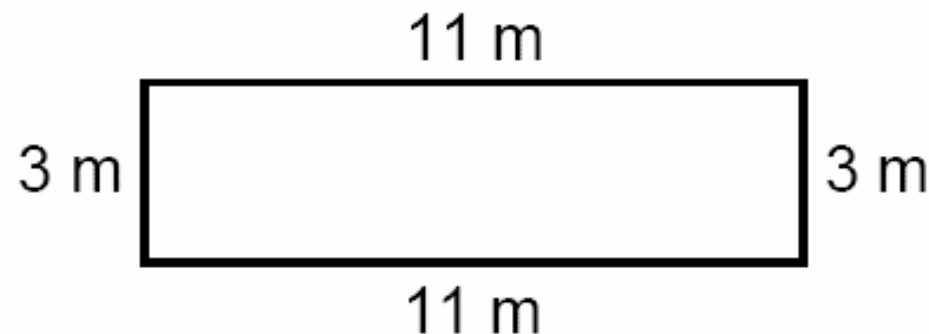
The perimeter of this figure is 51 inches.

- Perimeter is always measured in **<u>linear units</u>**.

Perimeter

- To calculate the perimeter of a regular figure add the lengths of all the sides!
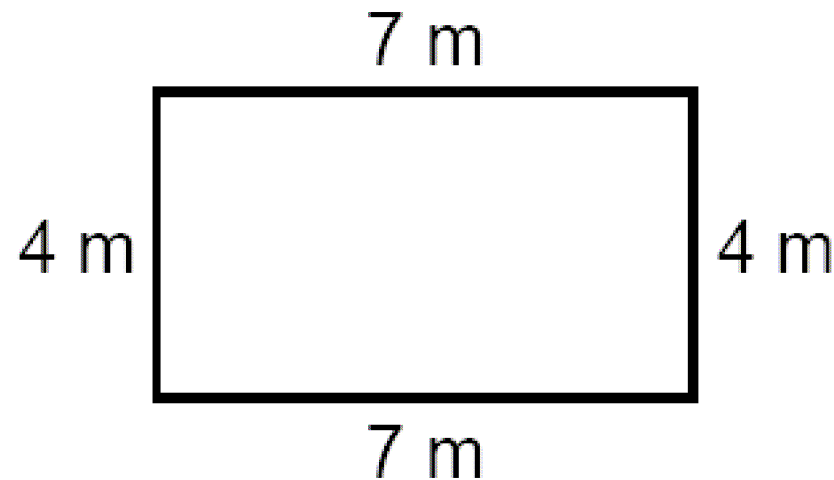
Perimeter = 11m + 3m + 11m + 3m

Perimeter = 28 m
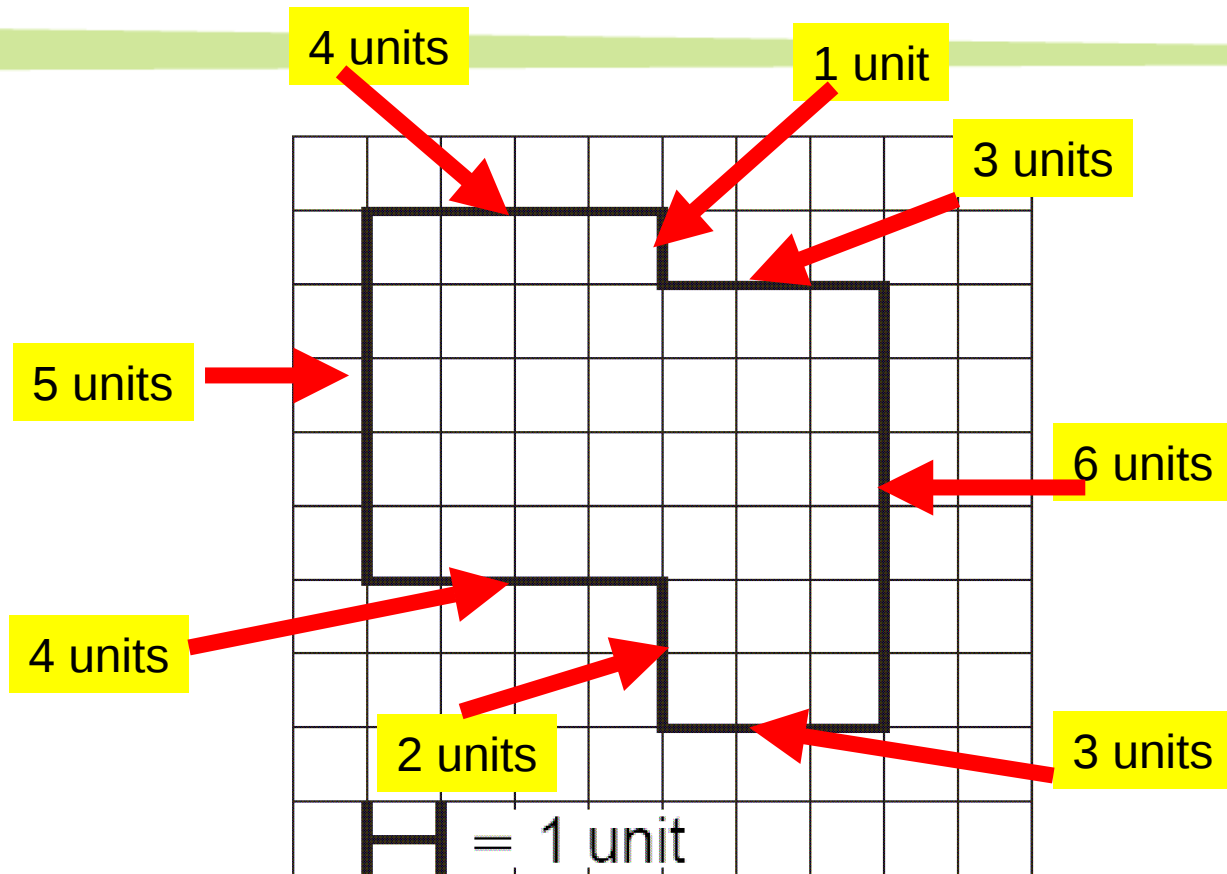
Perimeter

- Now you try...

7 m

4 m   4 m

7 m
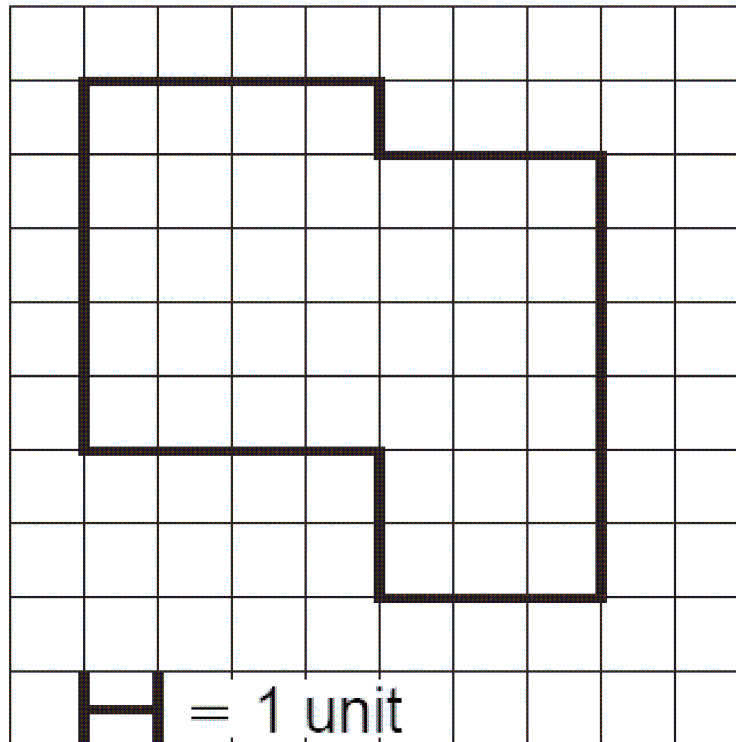
- Did you get P=7m + 4m + 7m + 4m ?
- Perimeter=22m

Perimeter

4 units

1 unit

3 units

5 units

6 units

4 units

2 units

3 units

= 1 unit

Perimeter

The perimeter of this shape is **28 units**.

= 1 unit

Area or Perimeter?

- tiles for a bathroom floor area
- lace for the edge of a tablecloth perimeter
- trim for the bulletin board in your classroom perimeter
- paint for a wall area
- grass seed for your front yard area
- M&M candies for the outside edge of a cake top perimeter
- carpet for the reading corner area
- fence for your backyard perimeter
- mulch to cover the playground area

Online Resources

http://www.bgfl.org/bgfl/custom/resources_ftp/client_ftp/ks2/maths/perimeter_and_area/

Online Resources

http://www.funbrain.com/poly/

Online Resources

http://www.mste.uiuc.edu/users/carvell/rectperim/RectPerim2.html

Rectangle Area and Perimeter - Question and Answer - Microsoft Internet Explorer provided by Charlotte-Mecklenburg Schools

File   Edit   View   Favorites   Tools   Help

Back | Favorites

Address   http://www.mste.uiuc.edu/users/carvell/rectperim/RectPerim2.html   Go   Links »

RECTANGLE: AREA, PERIMETER, LENGTH, AND WIDTH

Question: What is the largest the area of a rectangle can be if its perimeter is 20?

Discover the answer with this applet. Find the answer and a more challenging question below.

Also use this applet to examine the relation between length and width when the area, perimeter, or both are held constant. Use the line of constraint to draw a line on which the upper right corner of your rectangle will remain. Also use the trace with the hold area and perimeter buttons to see the line or curve created by this corner.

Area: 0.0   Width: 0.0
Perimeter: 0.0   Length: 0.0

Main Applet Page

Use a 14 by 18 Graph

Use a 70 by 90 Graph

Applet RectPerim started   Internet

Start   March 1 letter to 4th gra...   Area or Perimeter.ppt   Rectangle Area and P...   java.com: Hot Games, C...   1:18 PM

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Online Resources

http://www.woodlands-junior.kent.sch.uk/maths/measures.htm#Area

Area and Perimeter

Area of a rectangle	Shape Surveyor Game
Airlines Builder - perimeter - area relationship	Perimeter and Area
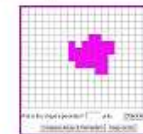
Area Explorer	Perimeter Explorer	Compare Area and Perimeter

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