
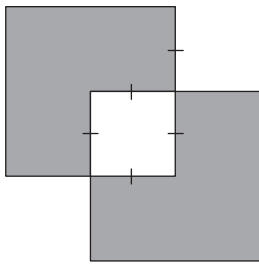



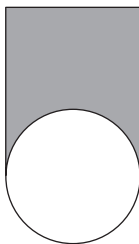
## Revision: Challenging Word Problems

Write your answers on the lines provided.

- Find the circumference of a quadrant of diameter 56 cm. (Take  $\pi = \frac{22}{7}$ )  
\_\_\_\_\_
- If  $\frac{1}{4}$  of the students who like green and  $\frac{1}{9}$  of the students who like blue and half of the number of students who like yellow are boys, how many girls are there in the class?  
\_\_\_\_\_
- The base of a triangle is 5 cm and its height is 10 cm. The triangle has the same area as a square. Find the perimeter of the square.  
\_\_\_\_\_
-  The figure below is made up of two identical squares of side 7 cm. What is the area of the shaded region?  
\_\_\_\_\_



-  Half of a circle is placed inside a rectangle measuring 14 cm by 22 cm. Find the area of the shaded part. (Take  $\pi = 3.14$ )  
\_\_\_\_\_



## Solutions to Revision: Challenging Word Problems

1. **44 cm**

$$\frac{\pi d}{4} = \frac{22}{7} \times 56 \times \frac{1}{4} = 44 \text{ cm}$$

2.  **$\frac{5}{36}$**

$$\text{Boys who like green} = \frac{1}{4} = \frac{9}{36}$$

$$\text{Boys who like blue} = \frac{1}{9} = \frac{4}{36}$$

$$\text{Boys who like yellow} = \frac{18}{36}$$

$$\text{Girls} = 1 - \frac{9}{36} - \frac{4}{36} - \frac{18}{36} = \frac{5}{36}$$

3. **20 cm**

$$\text{Area of triangle} = \frac{1}{2} \times 5 \times 10 = 25 \text{ cm}^2$$

$$\text{Length of square} = \sqrt{25} = 5 \text{ cm}$$

$$\text{Perimeter of square} = 4 \times 5 = 20 \text{ cm}$$

4. **73.5 cm<sup>2</sup>**

$$\text{Area of the unshaded square} = 3.5 \times 3.5 = 12.25 \text{ cm}^2$$

$$\text{Area of the shaded region} = 6 \times 12.25 = 73.5 \text{ cm}^2$$

5. **231.07 cm<sup>2</sup>**

$$\text{Area of the rectangle} = 14 \times 22 = 308 \text{ cm}^2$$

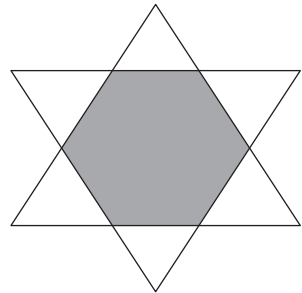
$$\text{Area of the semicircle} = \frac{1}{2} \times 3.14 \times \frac{14}{2} \times \frac{14}{2} = 76.93 \text{ cm}^2$$

$$\text{Area of the shaded part} = 308 - 76.93 = 231.07 \text{ cm}^2$$

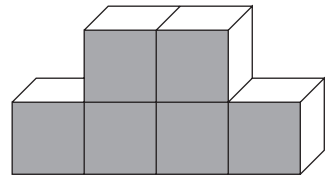
# Revision: Challenging Word Problems

Do these word problems. Show your working clearly in the space provided.

- This figure below is made up of two identical triangles. The base of the triangle is 36 cm and its height is 30 cm. Find the area of each small triangle if the shaded area is 720 cm<sup>2</sup>.



- Six similar cubes are stacked up as shown below. The total area of the shaded part is 600 cm<sup>2</sup>. Find the volume of each cube.



2. Area of the shaded part of each cube =  $600 \div 6 = 100 \text{ cm}^2$   
 Side of each cube =  $\sqrt{100} = 10 \text{ cm}$   
 $10 \times 10 \times 10 = 1000 \text{ cm}^3$   
 The volume of each cube is **1000 cm<sup>3</sup>**;

Solutions: 1. Area of each triangle =  $\frac{1}{2} \times 36 \times 30 = 540 \text{ cm}^2$   
 Area of 6 small triangles =  $540 + 540 - 720 = 360 \text{ cm}^2$   
 $360 \div 6 = 60 \text{ cm}^2$   
 The area of each small triangle is **60 cm<sup>2</sup>**.

## **Revision: Challenging Word Problems**

**Do these word problems. Show your working clearly in the space provided.**

1. George set off at 12 noon, driving at a uniform speed of 80 km/h and reached his destination at 10 pm. Calvin set off the same time as George and reached the same destination 2 hours earlier than George. How far was George from his destination when he was 120 km apart from Calvin?
  
2. Mike and Ken shared some stamps.  $\frac{1}{5}$  of Ken's stamps were  $\frac{1}{3}$  of Mike's stamps. If Mike gave Ken 24 stamps, Ken would have thrice as many stamps as Mike. Find the number of stamps each of them had in the beginning.
  
3. Four similar pens and three similar pencils cost \$18. Four similar rulers and three similar pencils cost \$12. The cost of three such pens and three such rulers is \$13.50. Find the cost of each pencil.

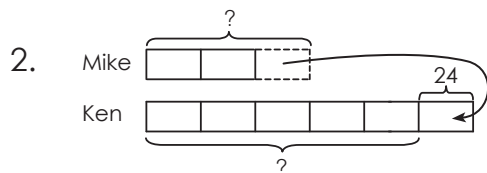
## Solutions to Revision: Challenging Word Problems

1. From 12 noon to 10 pm, it was 10 hours.  
 $80 \times 10 = 800$  km  
 The distance was 800 km.  
 $10 - 2 = 8$  h  
 Calvin took 8 h to complete the journey.  
 $800 \div 8 = 100$  km/h  
 Calvin speed was 100 km/h.

| Time  | Distance travelled by George | Distance travelled by Calvin | Difference |
|-------|------------------------------|------------------------------|------------|
| 1 pm  | 80 km                        | 100 km                       |            |
| 2 pm  | 160 km                       | 200 km                       |            |
| 3 pm  | 240 km                       | 300 km                       |            |
| 4 pm  | 320 km                       | 400 km                       |            |
| 5 pm  | 400 km                       | 500 km                       |            |
| 6 pm  | 480 km                       | 600 km                       | 120 km     |
| 7 pm  | 560 km                       | 700 km                       | 140 km     |
| 8 pm  | 640 km                       | 800 km                       | 160 km     |
| 9 pm  | 720 km                       |                              |            |
| 10 pm | 800 km                       |                              |            |

$$800 - 480 = 320 \text{ km}$$

George was **320 km** away from his destination when he was 120 km apart from Calvin.



$$3 \times 24 = 72$$

Mike had **72** stamps in the beginning.

$$5 \times 24 = 120$$

Ken had **120** stamps in the beginning.

3.  $12 \text{ rulers} + 9 \text{ pencils} = 3 \times \$12 = \$36$   
 $12 \text{ pens} + 12 \text{ rulers} = 4 \times \$13.50 = \$54$   
 $12 \text{ pens} + 9 \text{ pencils} = 3 \times \$18 = \$54$   
 $(12 \text{ rulers} + 9 \text{ pencils}) + (12 \text{ pens} + 12 \text{ rulers}) - (12 \text{ pens} + 9 \text{ pencils}) = \$36 + \$54 - \$54$   
 $24 \text{ rulers} = \$36$   
 $1 \text{ ruler} = \$36 \div 24 = \$1.50$
- $(4 \times \$1.50) + 3 \text{ pencils} = \$12$   
 $3 \text{ pencils} = \$12 - \$6 = \$6$   
 $1 \text{ pencil} = \$6 \div 3 = \$2$   
 The cost of each pencil was **\$2**.

## Mental Maths: GENERAL REVISION 20

Do these sums mentally.

1.  $403 \times 99 =$

2.  $140 \times 715 =$

3.  $\sqrt{3025} =$

4.  $59 \times 99 =$

5.  $30\,157 \times 11 =$

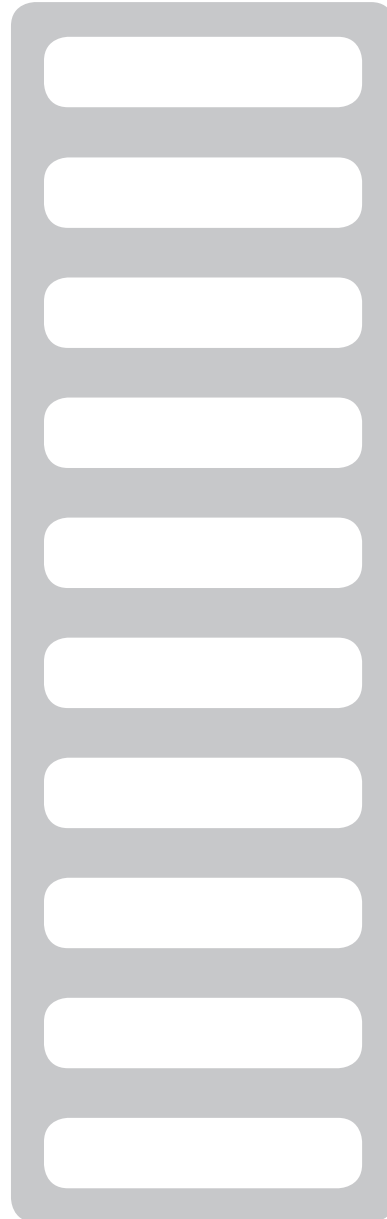
6.  $48 \times 1\frac{1}{3} =$

7.  $49^2 =$

8.  $\sqrt[3]{64\,000} =$

9.  $58^2 - 57^2 =$

10.  $36 + 38 + 40 + 42 + 44 + 46 + 48 =$



Solutions: 1. 39 897 2. 100 100 3. 55 4. 5841 5. 331 727 6. 64 7. 2401 8. 40 9. 115 10. 294