

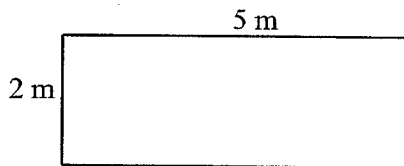
Unit 8 Study Guide

Area and Perimeter

Name Answer Key

Find the perimeter of each polygon.

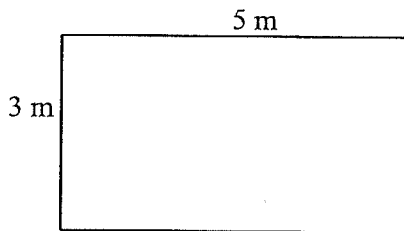
1.



Number model: $5 + 5 + 2 + 2 = 14\text{ m}$

Perimeter = 14 m

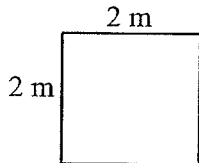
2.



Number model: $5 + 5 + 3 + 3 = 16\text{ m}$

Perimeter = 16 m

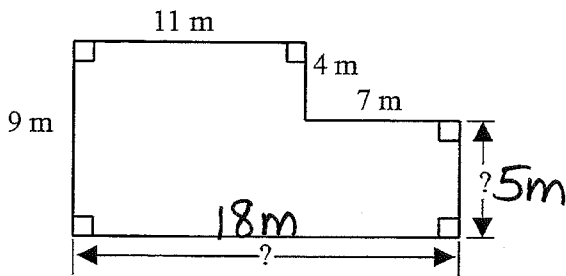
3.



Number model: $2 + 2 + 2 + 2 = 8\text{ m}$

Perimeter = 8 m

4. Find the perimeter of the figure.

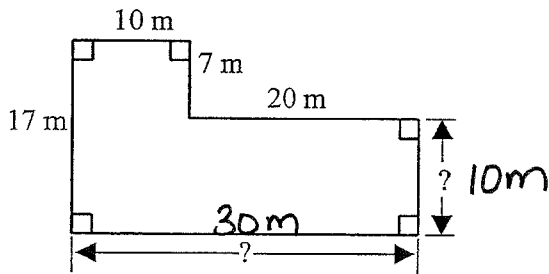


$$\begin{array}{r} 20 \\ 23 \\ + 11 \\ \hline 54 \end{array}$$

Number model: $11 + 9 + 18 + 5 + 7 + 4 = 54 \text{ m}$

Perimeter = 54 m

5. Find the perimeter of the figure.

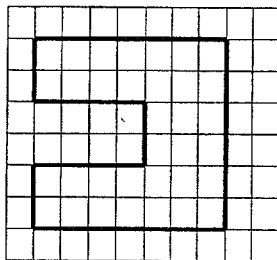


$$\begin{array}{r} 40 \\ 37 \\ + 17 \\ \hline 94 \end{array}$$

Number model: $30 + 10 + 20 + 7 + 10 + 17 = 94$

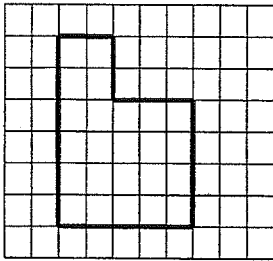
Perimeter = 94 m

6. What is the area of the polygon?



1 unit 34 cm^2

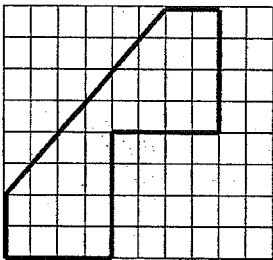
7. What is the area of the polygon?



1 unit

$$24 \text{ cm}^2$$

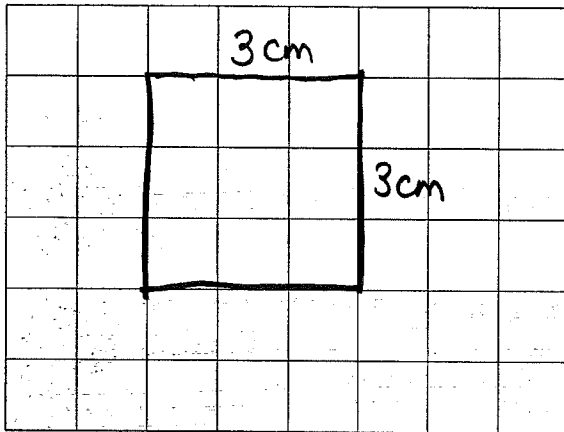
8. What is the area of the polygon?



1 unit

$$30 \text{ cm}^2$$

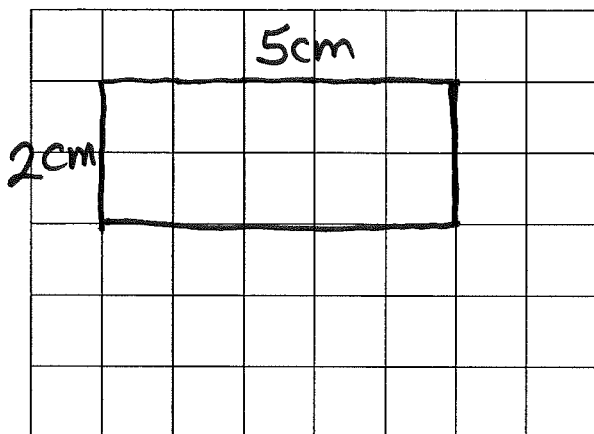
9. Draw a rectangle with an area of 9 cm^2 and a perimeter of 12 cm .



$$A = 3 \times 3 = 9 \text{ cm}^2$$

$$P = 3 + 3 + 3 + 3 = 12 \text{ cm}$$

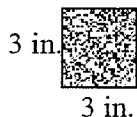
10. Draw a rectangle with an area of 10 cm^2 and a perimeter of 14 cm .



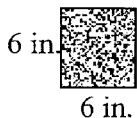
$$A = 5 \times 2 = 10 \text{ cm}^2$$

$$P = 5 + 5 + 2 + 2 = 14 \text{ cm}$$

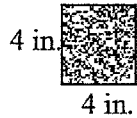
11. Mrs. Lopez wants to tile her dining room floor. The room is 12 feet wide and 25 feet long.
- How many 1-square-foot tiles does she need to cover the floor?
 - Suppose Mrs. Lopez chooses tiles that are 3 inches on each side. How many 3-inch tiles would she need in order to cover her dining room floor? Explain how you got your answer.



12. Mrs. Lopez wants to tile her dining room floor. The room is 12 feet wide and 18 feet long.
- How many 1-square-foot tiles does she need to cover the floor?
 - Suppose Mrs. Lopez chooses tiles that are 6 inches on each side. How many 6-inch tiles would she need in order to cover her dining room floor? Explain how you got your answer.



13. Mrs. Lopez wants to tile her dining room floor. The room is 20 feet wide and 16 feet long.
- How many 1-square-foot tiles does she need to cover the floor?
 - Suppose Mrs. Lopez chooses tiles that are 4 inches on each side. How many 4-inch tiles would she need in order to cover her dining room floor? Explain how you got your answer.



14. Add or subtract.

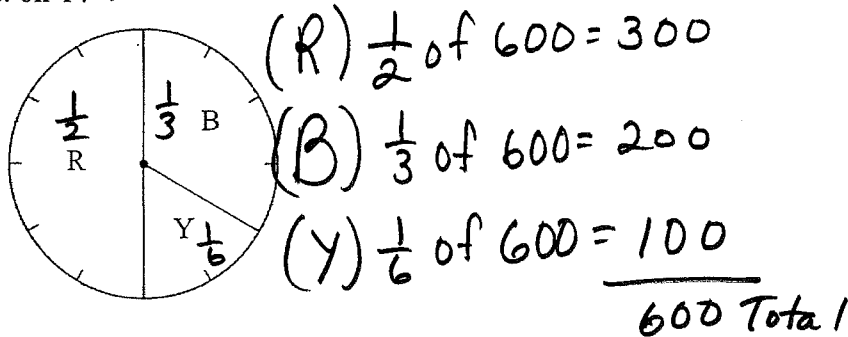
a. $\frac{5}{5} = \frac{2}{5} + \frac{3}{5}$

b. $\frac{4}{3} = \frac{2}{3} + \frac{2}{3}$

c. $\frac{3}{3} - \frac{1}{3} = \frac{2}{3}$

d. $\frac{2}{5} - \frac{1}{5} = \frac{1}{5}$

15. If you spin the spinner 600 times, how many times would you expect it to land:
- on R? **300**
 - on B? **200**
 - on Y? **100**



16. A bag contains 4 blue blocks, 5 purple blocks, 4 green blocks, and 5 yellow blocks. You put your hand in the bag and pull out a block. About what fraction of the time would you expect to get a yellow block?

$$4 + 5 + 4 + 5 = 18 \text{ blocks}$$

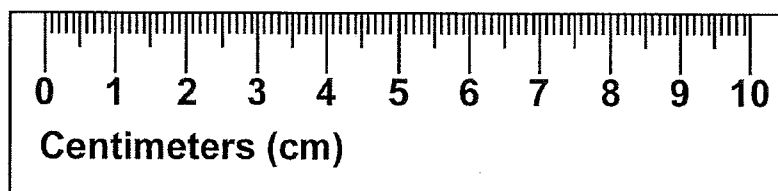
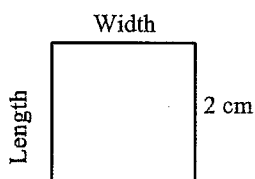
$$\text{Yellow} = 5$$

$$\frac{5}{18}$$

5.

Complete the following measures for the rectangle below.
Formula for the area of a rectangle: Area = base \times height.

17.



width = 2 cm

length = 2 cm $P = 2 + 2 + 2 + 2 = 8 \text{ cm}$

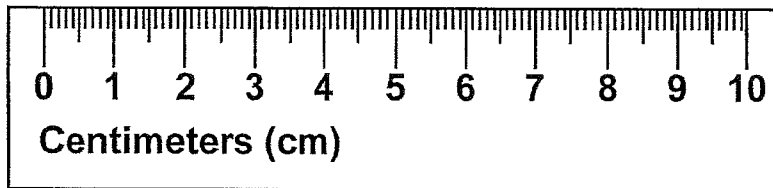
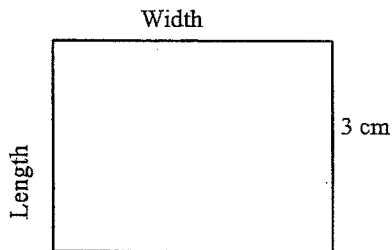
perimeter = 8 cm

area = 4 cm^2 $A = 2 \times 2 = 4 \text{ cm}^2$

6.

Complete the following measures for the rectangle below.
Formula for the area of a rectangle: Area = base \times height.

18.



width = 4 cm

length = 3 cm

perimeter = 14 cm

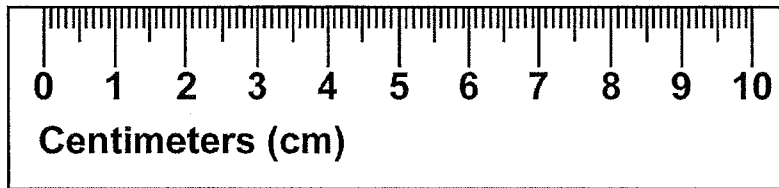
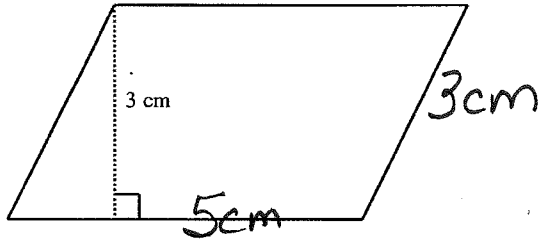
area = 12 cm²

$$P = 4 + 4 + 3 + 3 = 14 \text{ cm}$$

$$A = 4 \times 3 = 12 \text{ cm}^2$$

Complete the following measures for the parallelogram below.
 Formula for the area of a parallelogram: Area = base \times height.

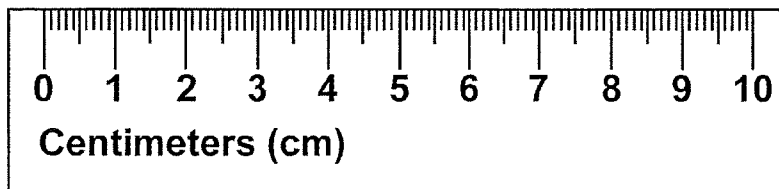
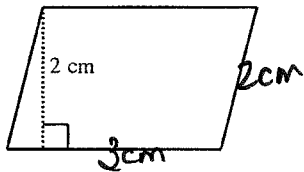
19.



base = 5 cm
 height = 3 cm
 perimeter = 16 cm
 area = 15 cm²

$P = 5 + 3 + 5 + 3 = 16 \text{ cm}$
 $A = 5 \times 3 = 15 \text{ cm}^2$

20.



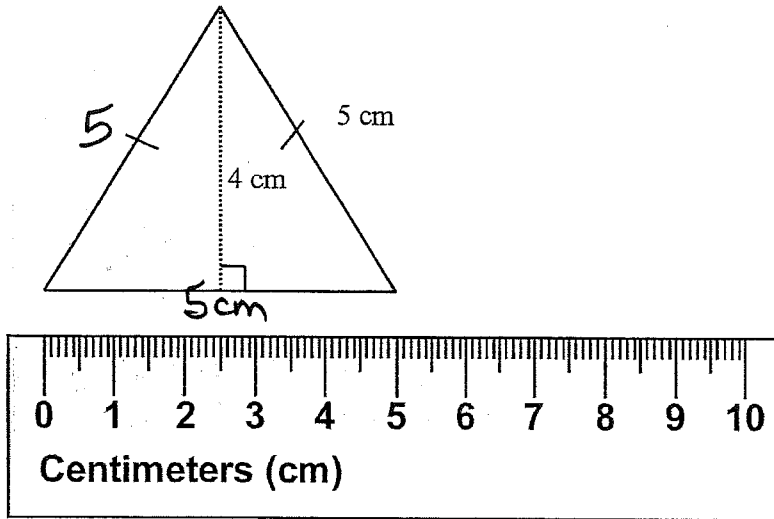
base = 3 cm
 height = 2 cm
 perimeter = 10 cm
 area = 6 cm²

$P = 3 + 2 + 3 + 2 = 10 \text{ cm}$
 $A = 3 \times 2 = 6 \text{ cm}^2$

Complete the following measures for the triangle below.

Formula for the area of a triangle: $\text{Area} = \frac{1}{2} \times (\text{base} \times \text{height})$.

21.



base = 5 cm

height = 4 cm

perimeter = 15 cm

area = 10 cm²

$$P = 5 + 5 + 5 = 15 \text{ cm}$$

$$A = \frac{1}{2} (B * H)$$

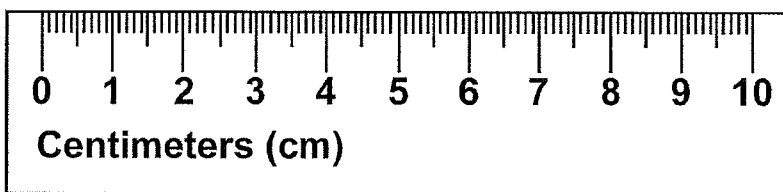
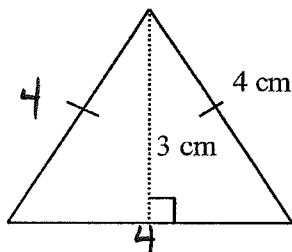
$$\frac{1}{2} (5 * 4) = \frac{1}{2} (20)$$

$$\frac{1}{2} (20) = 10 \text{ cm}^2$$

Complete the following measures for the triangle below.

Formula for the area of a triangle: $\text{Area} = \frac{1}{2} \times (\text{base} \times \text{height})$.

22.



base = 4 cm

height = 3 cm

perimeter = 12 cm

area = 6 cm²

$$P = 4 + 4 + 4 = 12 \text{ cm}$$

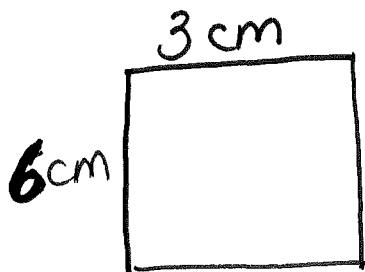
$$A = \frac{1}{2} (B * H)$$

$$\frac{1}{2} (4 \times 3) = \frac{1}{2} (12) = 6 \text{ cm}^2$$

23. Scale: 1 cm = 5 meters

Dimensions of rectangle: 15 meters by 30 meters.

Make a scale drawing of this rectangle.



$$3 \times 5^m = 15 \text{ m}$$

$$5 \text{ cm} \times (6 \text{ cm}) = 30 \text{ m}$$