

Area and Perimeter Revision Set 1 – Answers

204 Converting Units of Linear Measurement

1. Convert these lengths into the units in brackets

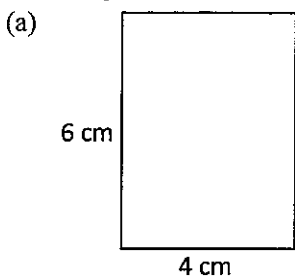
- (a) 10 km (metres) 10 000 metres
- (b) 200 cm (metres) 2 metres
- (c) 3 metres (millimetres) 3000 millimetres
- (d) 30 000 grams (kilograms) 30 kilograms

205 Perimeter

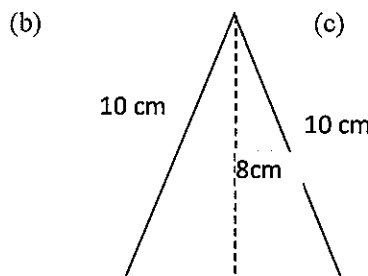
2. Here are five possible definitions of the word perimeter. Which ones are correct?

- (a) The amount of space within a shape
- (b) The distance around a shape **CORRECT**
- (c) Add up all the numbers around the shape
- (d) The base multiplied by the height
- (e) How far you would have to walk if you walked around the shape **CORRECT**

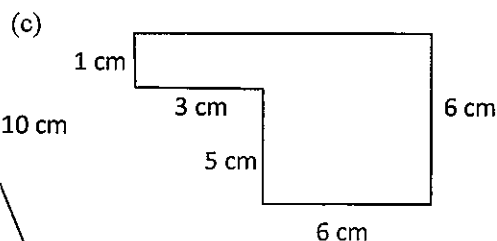
3. Find the perimeter of each shape:



$$P = 6 + 4 + 6 + 4 = \underline{20 \text{ cm}}$$



$$P = 10 + 10 + 6 = \underline{26 \text{ cm}}$$

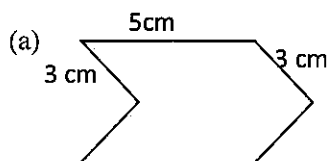


$$P = 1 + 9 + 6 + 6 + 5 + 3 = \underline{30 \text{ cm}}$$

4. (a) What is the perimeter of a regular octagon where each side is 12 mm long? $8 \times 12 = \underline{96 \text{ mm}}$

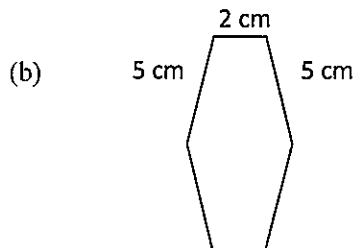
(b) Give your answer in cm. 9.6 cm

5. Both of the shapes below are symmetrical. Which one has a larger perimeter?



$$P = (3 + 5 + 3) + (3 + 5 + 3) = \underline{22 \text{ cm}}$$

The first shape has a larger perimeter



$$P = (5 + 2 + 5) + (5 + 2 + 5) = \underline{24 \text{ cm}}$$

206 Area

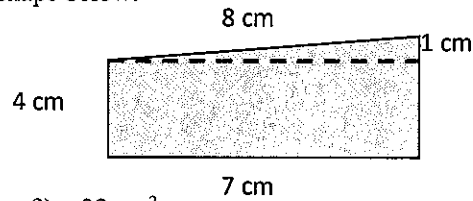
6. (a)(b)(c) Find the area of each shape in Question 7.

(a) $A = 4 \times 6 = \underline{24 \text{ cm}^2}$

(b) $A = \frac{1}{2} \times 6 \times 8 = \underline{24 \text{ cm}^2}$

(c) $A = (6 \times 6) + (3 \times 1) = \underline{39 \text{ cm}^2}$ or $A = (6 \times 5) + (9 \times 1) = \underline{39 \text{ cm}^2}$

7. Find the area of the shape below:



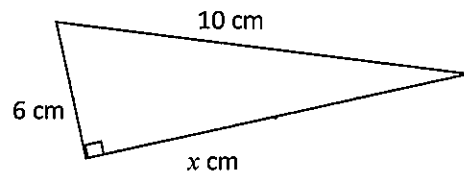
$A = (7 \times 4) + (\frac{1}{2} \times 1 \times 8) = \underline{32 \text{ cm}^2}$

8. This triangle has an area of 24 cm^2
Find the value of x

$x = 8 \text{ cm}$

then

$A = \frac{1}{2} \times 8 \times 6 = 24 \text{ cm}^2$



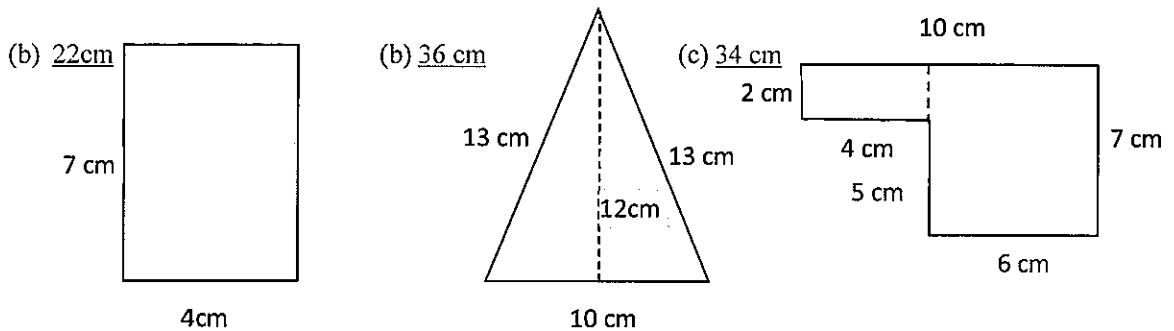
Area and Perimeter Revision Set 2 – Answers

204 Converting Units of Linear Measurement

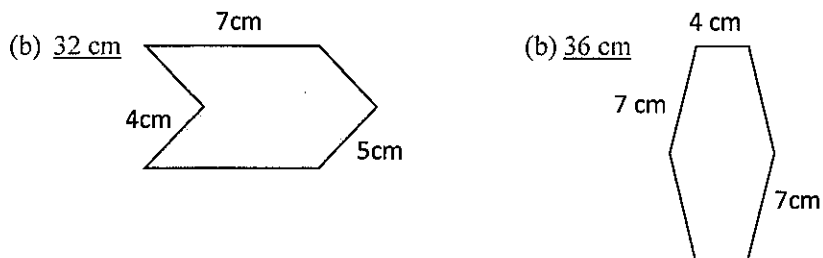
- Convert these lengths into the units in brackets
 - 200 cm (metres) 2 metres
 - 5 km (metres) 5000 metres
 - 5 kilograms (grams) 5000 grams
 - 30 metres (centimetres) 3000 centimetres
- [EXTENSION]
 - 50 cm (metres) 0.5m
 - 20 grams (kilograms) 0.02 kg
 - 3 centimetres (kilometres) 0.00003 km
 - 2.4 millimetres (kilometres) 0.0000024 km

205 Perimeter

- Find the perimeter of each shape:

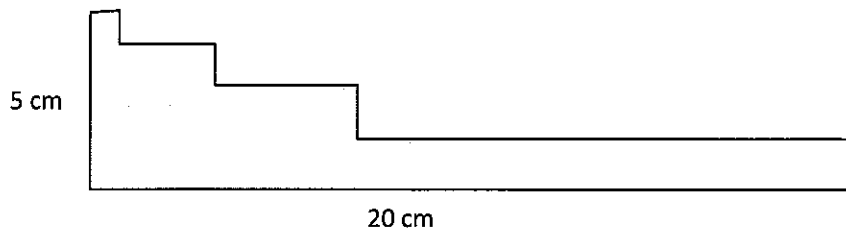


- What is the perimeter of a regular hexagon where each side is 15 mm long? $6 \times 15 = \underline{90\text{mm}}$
 - Give your answer in cm. $90\text{mm} = \underline{9\text{cm}}$
- Both of the shapes below are symmetrical. Which one has a larger perimeter? Shape (b)



6. [EXTENSION]

(a) Find the perimeter of this shape (without measuring it) 50 cm



(b) A shape is **equable** if the area is the same number as the perimeter.

Find an equable square and an equable rectangle. A square of side length 4 or a 3 by 6 rectangle.

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7. (a)(b)(c) Find the area of each shape in Question 7.

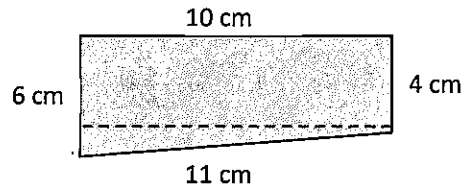
(a) $7 \times 4 = 28 \text{ cm}^2$

(b) $\frac{1}{2} \times 10 \times 12 = 60 \text{ cm}^2$

(a) $(2 \times 4) + (6 \times 7) = 50 \text{ cm}^2$

8. Find the area of the shape below:

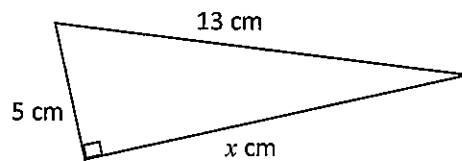
$A = (10 \times 4) + (\frac{1}{2} \times 10 \times 2) = 50 \text{ cm}^2$



9. This triangle has an area of 30 cm^2

Find the value of x .

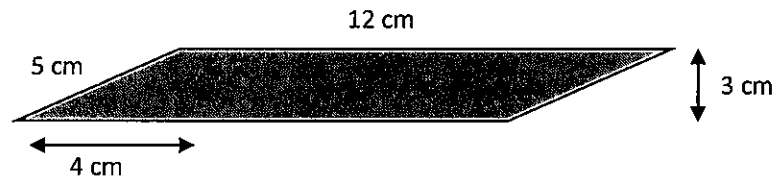
$x = 12 \text{ cm}$



10. [EXTENSION]

(a) Find the area of this parallelogram

$A = 36 \text{ cm}^2$



(b) Find a general formula for the area of any parallelogram.

$A = \text{base} \times \text{vertical height}$ (just like a rectangle)