Solve problems in the context of perimeter
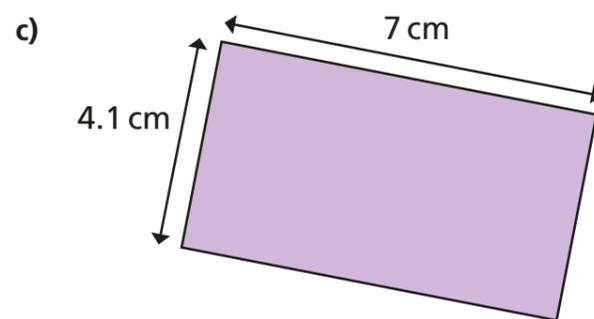
White Rose Maths

1 Work out the perimeter of each shape.

The diagrams are not drawn accurately.

a)

11 cm

7 cm

8.5 cm

perimeter = 26.5 cm

b)

5.7 cm

8.1 cm
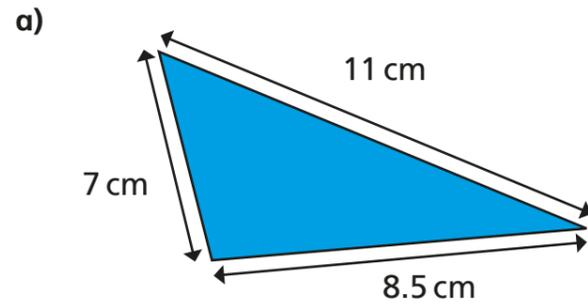
9.9 cm

perimeter = 23.7 cm

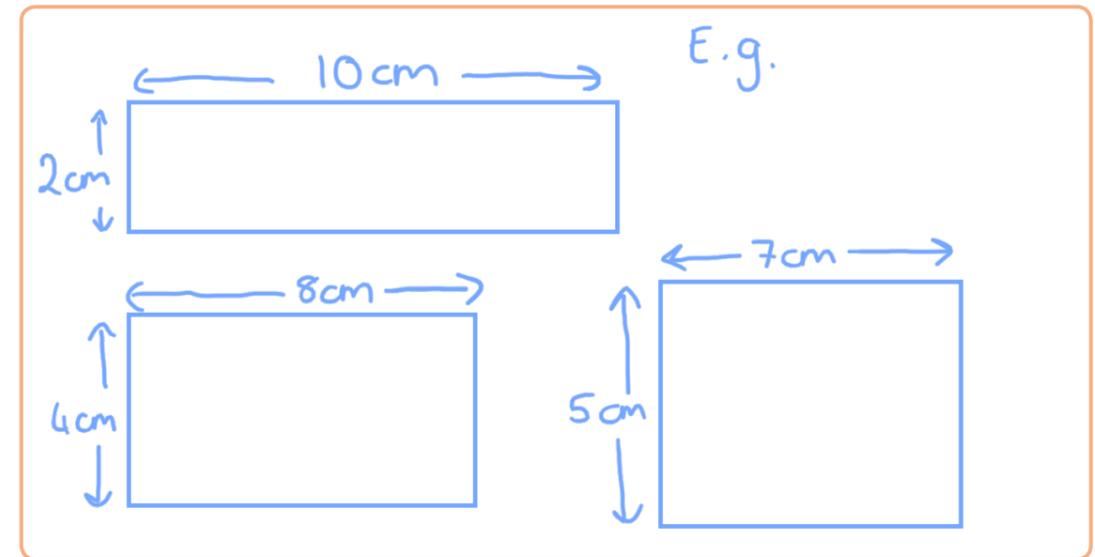**c)**

7 cm
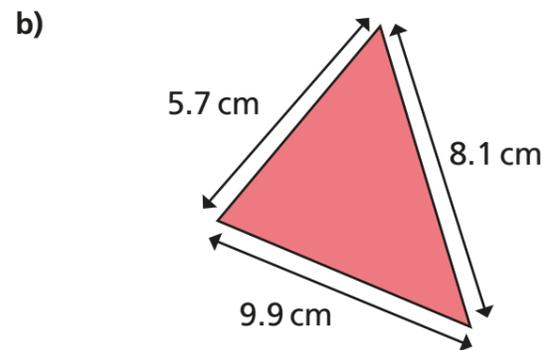
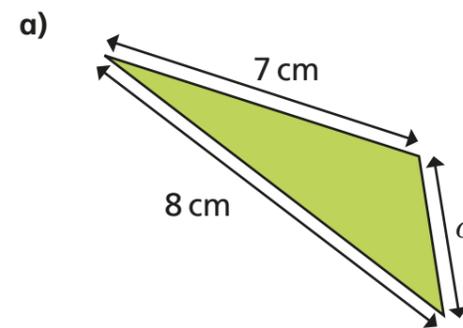4.1 cm

perimeter = 22.2 cm
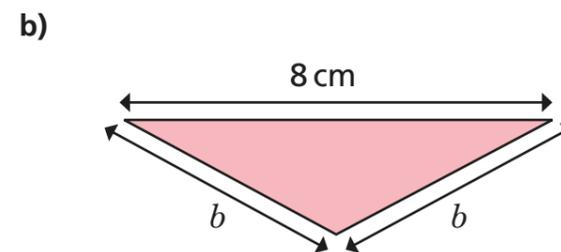
d)

14.2 cm

0.9 cm
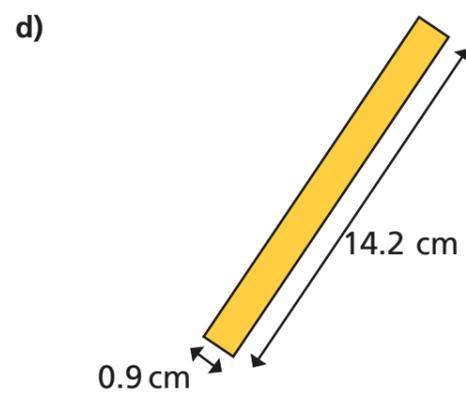
perimeter = 30.2 cm

2 The perimeter of a rectangle is 24 cm.

The lengths of the sides are all integers.

Draw and label three possibilities of what the rectangle could look like.
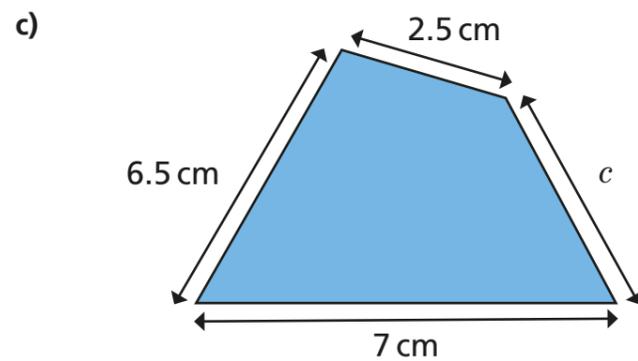
E.g.

10 cm

2 cm

8 cm

4 cm

7 cm

5 cm

3 The shapes each have a perimeter of 20 cm.

Work out the missing lengths.

The diagrams are not drawn accurately.

a)

7 cm

8 cm

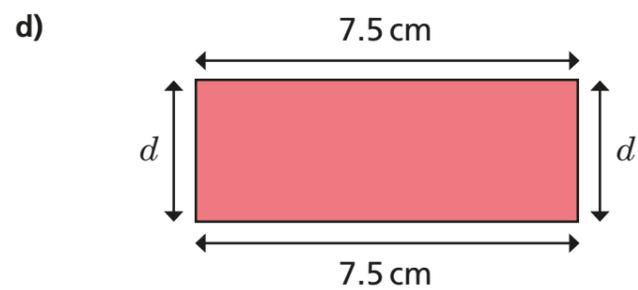a

$a = 5$ cm

b)

8 cm

b b

$b = 6$ cm

c)

2.5 cm

6.5 cm

c

7 cm

$c = $ |4cm|

d)

7.5 cm

d d

7.5 cm

$d = $ |2·5cm|

4 The sides of a pentagon are 12 cm, 12 cm, 14 cm, 15 cm and x cm.

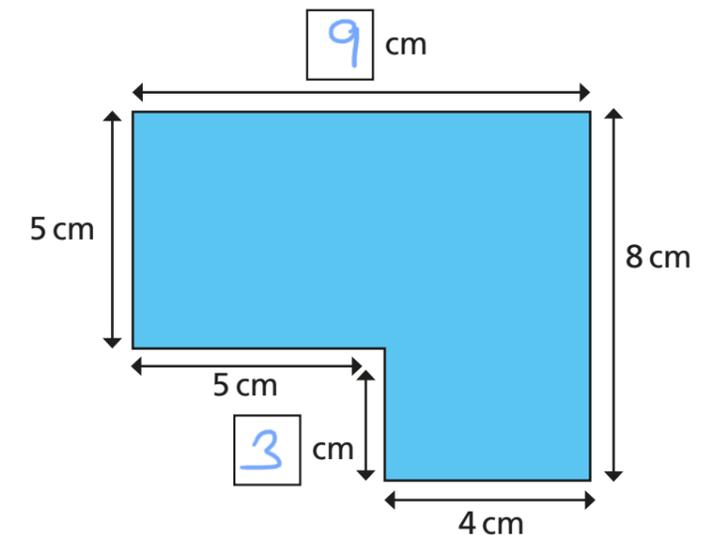**a)** Work out the perimeter of the pentagon if $x = 17$ cm.

perimeter = |70cm|

b) If the perimeter of the pentagon is 61 cm, what is the value of x?

$x = $ |8|

5 One side of a rectangle is 6.3 cm long.

The perimeter of the rectangle is 17.6 cm.

Work out the lengths of the other sides of the rectangle.

|6·3cm| , |2·5 cm| and |2·5cm|

6 **a)** Work out the missing lengths of this hexagon and label them on the diagram. It is not drawn accurately.

|9| cm

5 cm

8 cm

5 cm

|3| cm

4 cm

b) Work out the perimeter of the hexagon.

perimeter = |34cm|

c) What assumption have you made about the angles in the hexagon?

They're right angles.