Form and Solve Linear Equations for Problems Involving Area and Perimeter: Exercise 2
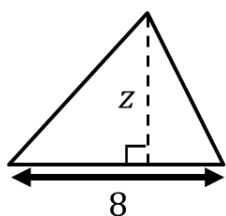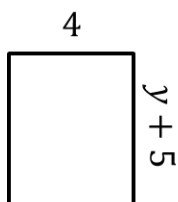
1 The area of the rectangle is 42 mm², find the value of y.
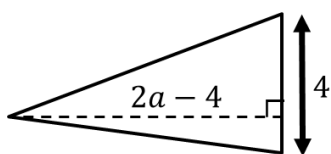
$$2$$
$$3y$$

2 The area of the triangle is 24 cm², find the value of z.

$$z$$
$$8$$

3 The area of this rectangle is 48. Determine y.

$$4$$
$$y + 5$$

4 The area of the triangle is 20 cm², find the value of a.

$$2a - 4 \qquad 4$$

5 The area of the trapezium is 72 mm², find the value of b.

$$10$$
$$2b - 1$$
$$6$$
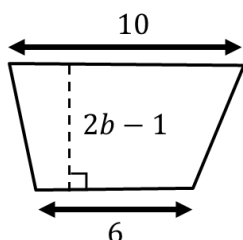
6 Given that the area of the rectangle is 12 cm², find its perimeter by first finding z.

$$6$$
$$2z - 3$$
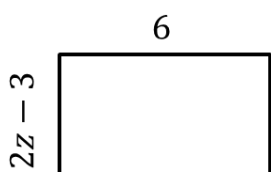
7 The compound shape is made up of a rectangle and a parallelogram. It has an area of 100 cm².

$$3x + 6$$
$$8$$
$$10$$
$$2x - 2$$
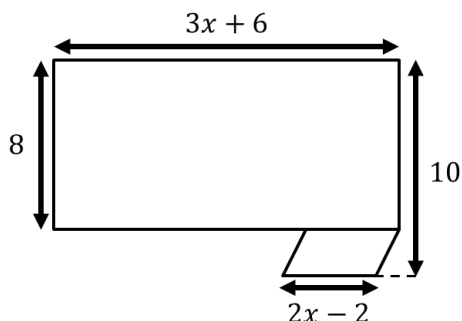
a Find the value of x.

b Find the area of the parallelogram.

8 The compound shape is made up of a semicircle and a rectangle. It has an area of 90π mm². Find the exact value of y.

$$3y$$
$$12$$
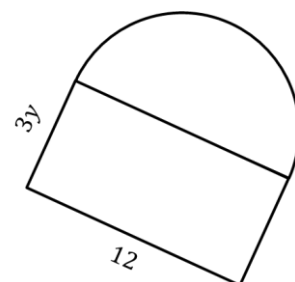
9 *[AQA IGCSE FM Jan2013-P2 Q5]*
A parallelogram and a trapezium are shown. All lengths are in centimeters.
The area of the parallelogram is equal to the area of the trapezium.
Work out the value of x.

$$5$$
$$x + 3$$

$$x$$
$$6$$
$$12$$
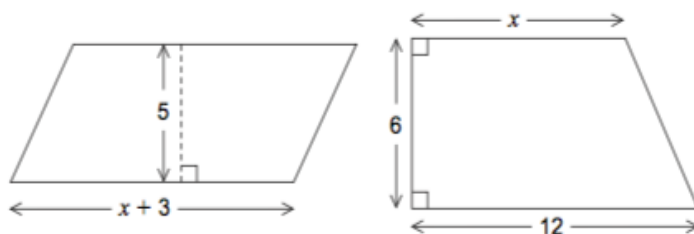
10 The two areas are equal. Find the value of each area.

$$5$$
$$6x - 4$$

$$5x + 4 \qquad 8$$