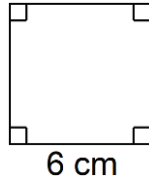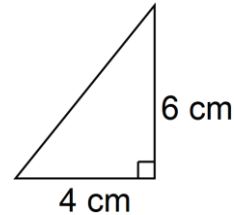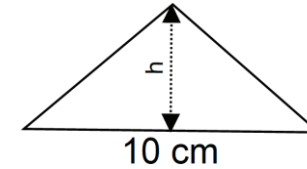Calculate the area of the square

6 cm

Calculate the area of the triangle

6 cm

4 cm

If the triangle has an area of 40 cm² calculate the height

h

10 cm

The logo shown below has a total area of 125 cm² and the square has side length 5 cm. Calculate the width of the logo

Calculate the area of the square

6 x 6 =
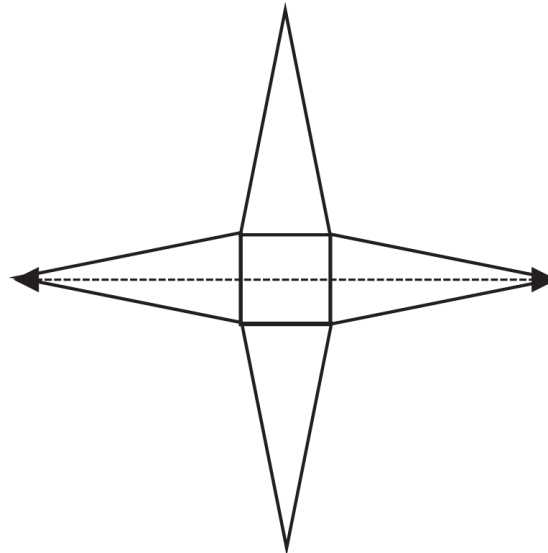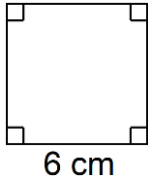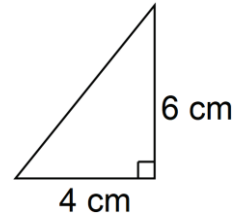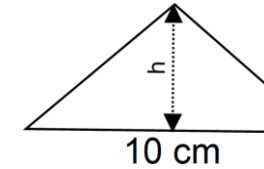36 cm²

6 cm

Calculate the area of the triangle

½ x 6 x 4

= 12 cm²

6 cm

4 cm

If the triangle has an area of 40 cm² calculate the height

½ x 10 x h = 40

5h = 40

h = 8 cm

h

10 cm

The logo shown below has a total area of 125 cm² and the square has side length 5 cm. Calculate the width of the logo

5 x 5 = 25 cm²

4 triangles have an area of 100cm²

1 triangle has an area of 25 cm²

½ x 5 x h = 25
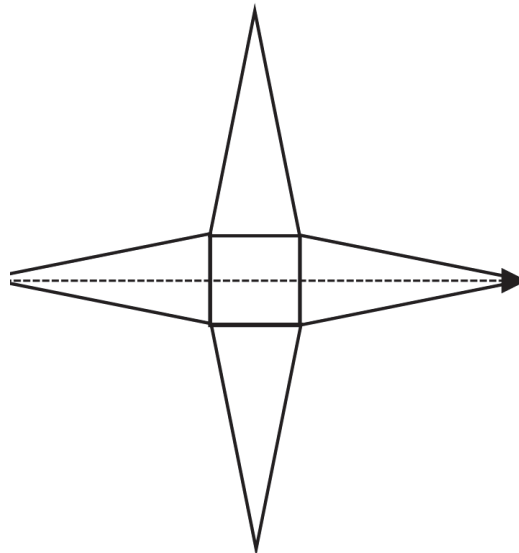
h = 10 cm

Total width

10 cm + 5 cm + 10 cm

= 25 cm

The logo shown below has a total area of 112 cm². The square has a side length of 8 cm and all of the triangles are identical. Calculate the width of the logo.

width

The logo shown below has a total area of 112 cm². The square has a side length of 8 cm and all of the triangles are identical. Calculate the width of the logo.

Area of the square

$$8 \times 8 = 64 \ cm^2$$

Area of the triangles

$$112 - 64 = 48 \ cm^2$$

Area of one triangle

$$48 \div 4 = 12 \ cm^2$$

h

Area of a triangle

$$\frac{1}{2} \times 8 \times h = 12$$

$$h = 3 \ cm$$

Width

$$= 3 \ cm + 8 \ cm + 3 \ cm$$

$$= 14 \ cm$$

width

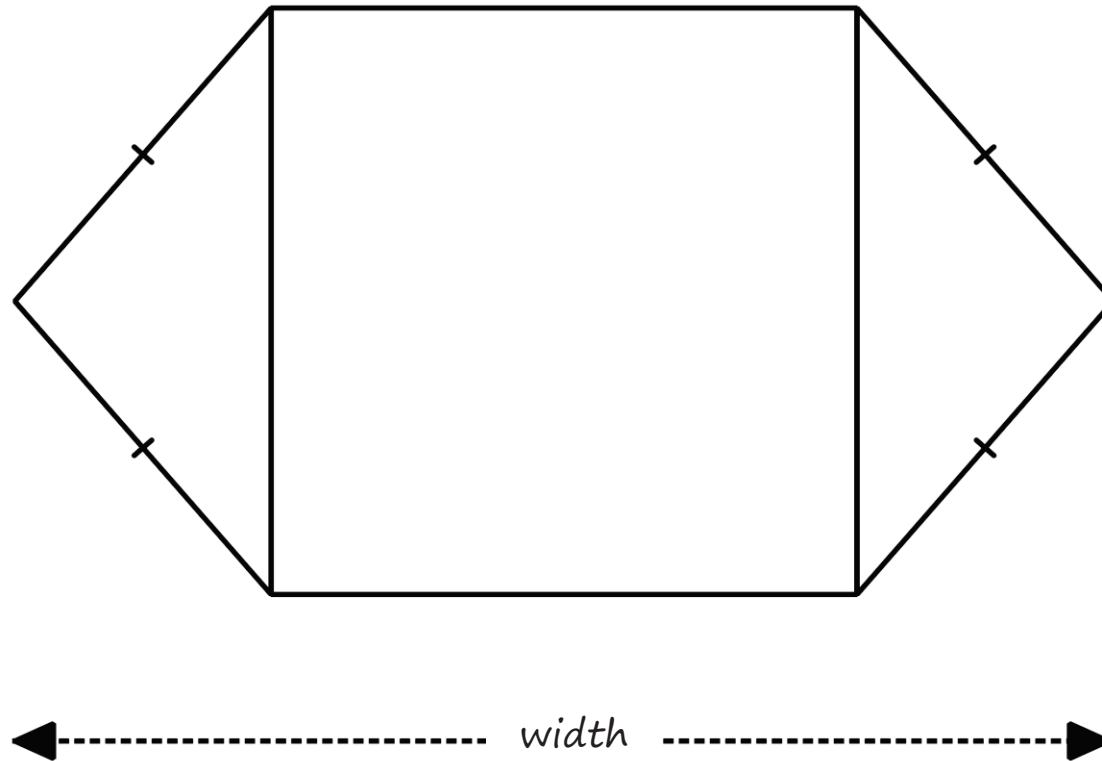The logo shown below has a total area of 204 cm². The square has a side length of 12 cm Calculate the width of the logo.

width
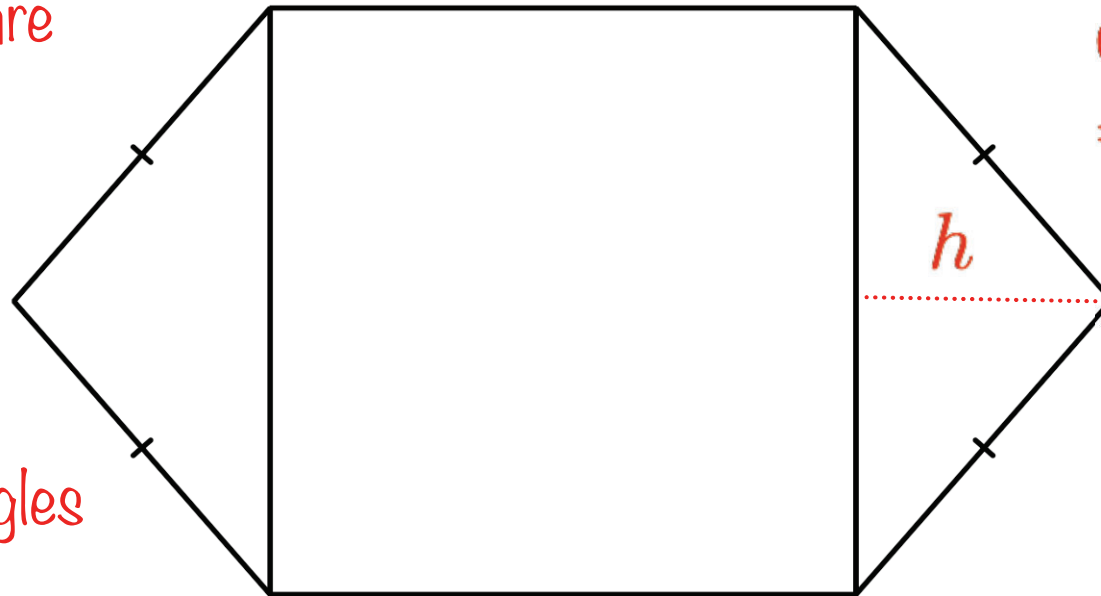
The logo shown below has a total area of 204 cm². The square has a side length of 12 cm Calculate the width of the logo.

Area of one triangle

$60 \div 2$

$= 30 \ cm^2$

Area of the square

12×12

$= 144 \ cm^2$

h

$\dfrac{1}{2} \times 12 \times h = 30$

$h = 5 \ cm$

Area of the triangles

$204 - 144$

$= 60 \ cm^2$

width

Width

$5 + 12 + 5$

$= 22 \ cm$

The logo shown below is a made from a square with 2 congruent isosceles triangles removed. It has a total area of 108 cm². Calculate h.

12 cm

The logo shown below is a made from a square with 2 congruent isosceles triangles removed. It has a total area of 108 cm². Calculate h.

Area of the
full square

12×12

$= 144 \ cm^2$

Area of the triangles

$144 - 108$

$36 \ cm^2$

Area of one
triangle

$36 \div 2 =$

$= 18 \ cm^2$

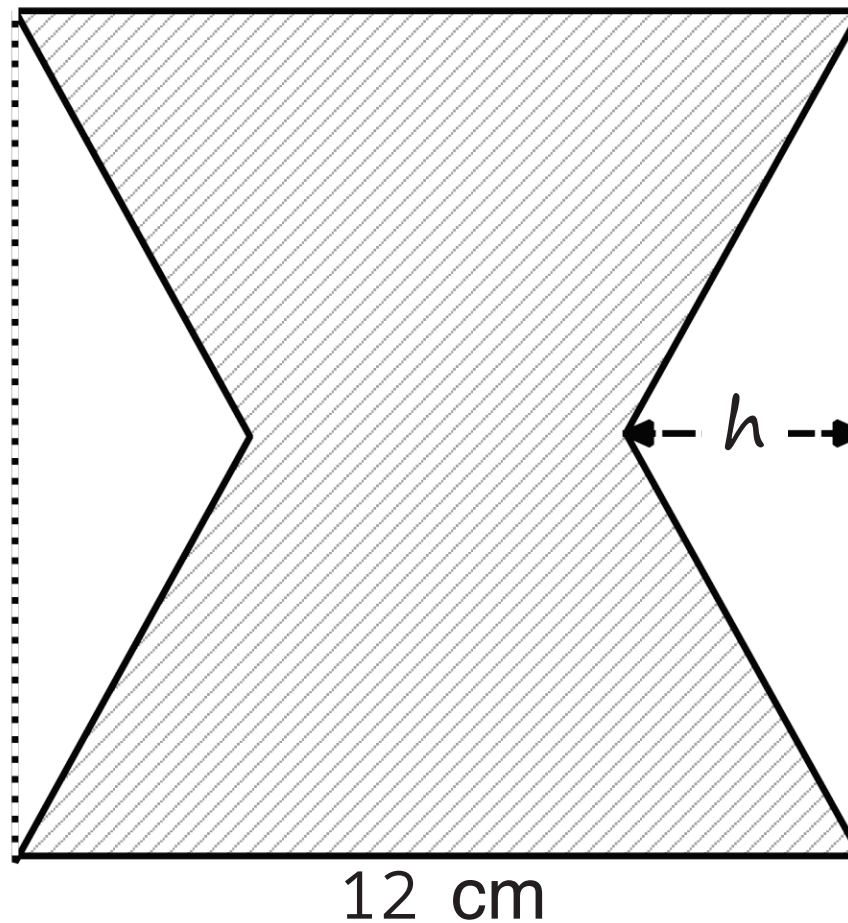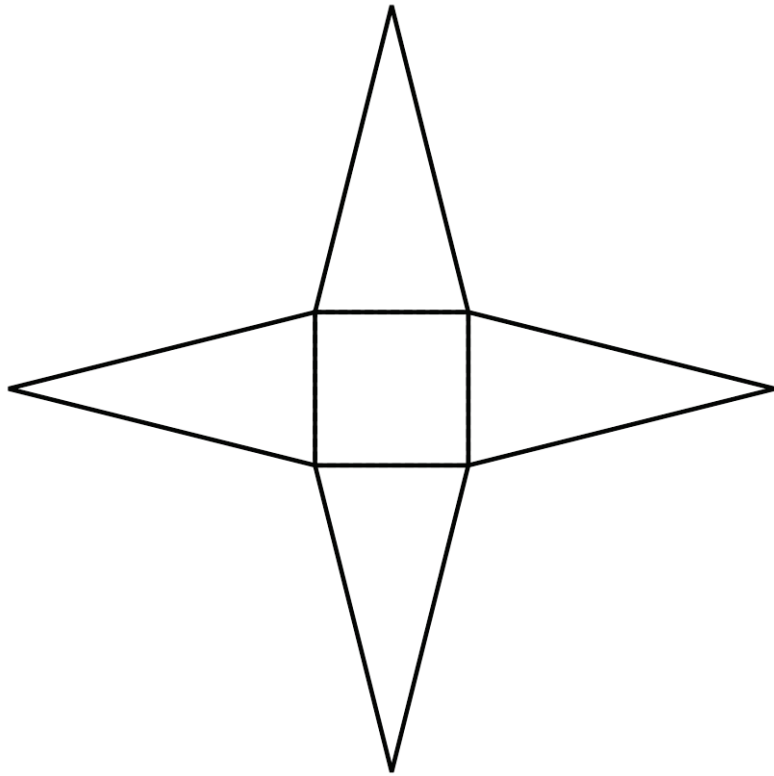$\frac{1}{2} \times 12 \times h = 18$

$h = 3 \ cm$

h

12 cm

The logo shown below is a made from a square with side length 6 cm and 4 congruent isosceles. It has a total area of 156 cm².
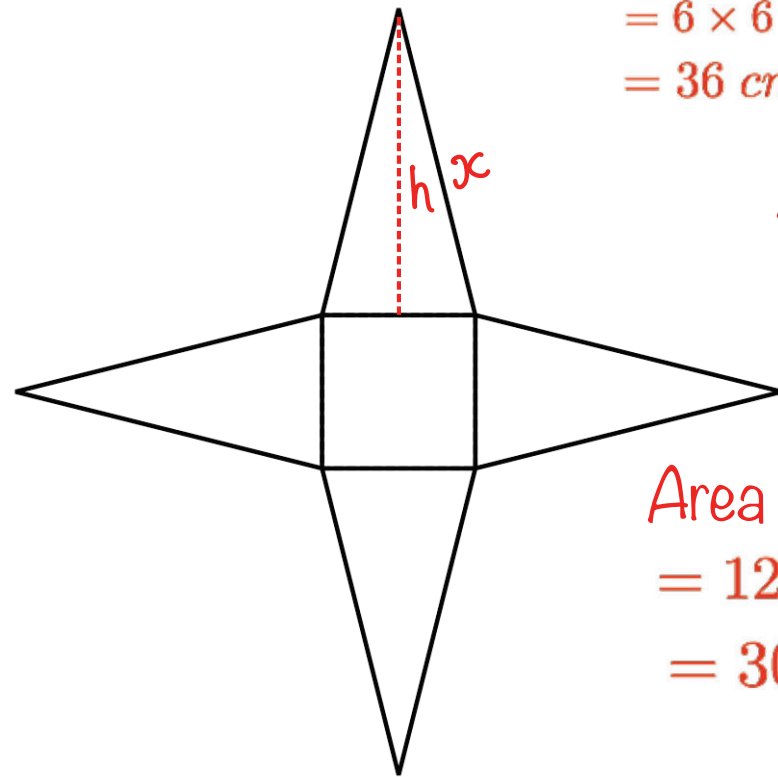
Calculate the perimeter of the logo.

The logo shown below is a made from a square with side length 6 cm and 4 congruent isosceles. It has a total area of 156 cm².

Calculate the perimeter of the logo.

Area of the square

$= 6 \times 6$

$= 36 \ cm^2$

$\frac{1}{2} \times 6 \times h = 30$

$h = 10 \ cm$

Area of the triangles

$156 - 36$

$= 120 \ cm^2$

$x^2 = 10^2 + 3^2$

$x = \sqrt{109}$

$= 10 \cdot 44$

Area of a triangle

$= 120 \div 4$

$= 30 \ cm$

Perimeter

$8 \times 10 \cdot 44$

$= 83.52 \ cm$

R

PROBLEM 1A

The logo shown below has a total area of 112 cm². The square has a side length of 8 cm and all of the triangles are identical. Calculate the width of the logo.

width

PROBLEM 1B

The logo shown below has a total area of 204 cm². The square has a side length of 12 cm Calculate the width of the logo.

width

PROBLEM 1C

The logo shown below is a made from a square with 2 congruent isosceles triangles removed. It has a total area of 108 cm². Calculate h.

h

12 cm

PROBLEM 1D

The logo shown below is a made from a square with side length 6 cm and 4 congruent isosceles. It has a total area of 156 cm². Calculate the perimeter of the logo.
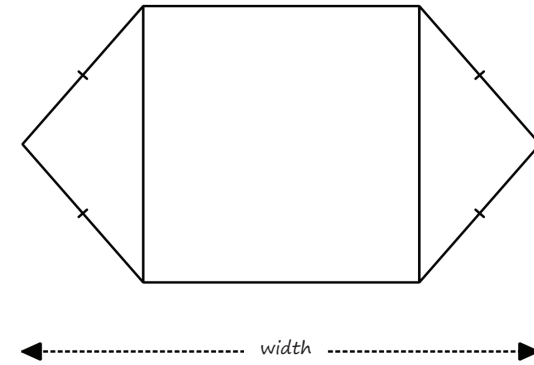
PROBLEM 1A

The logo shown below has a total area of 112 cm². The square has a side length of 8 cm and all of the triangles are identical. Calculate the width of the logo.

Area of the square
$$8 \times 8 = 64 \ cm^2$$

Area of the triangles
$$112 - 64 = 48 \ cm^2$$

Area of one triangle
$$48 \div 4 = 12 \ cm^2$$

h

Area of a triangle
$$\frac{1}{2} \times 8 \times h = 12$$
$$h = 3 \ cm$$
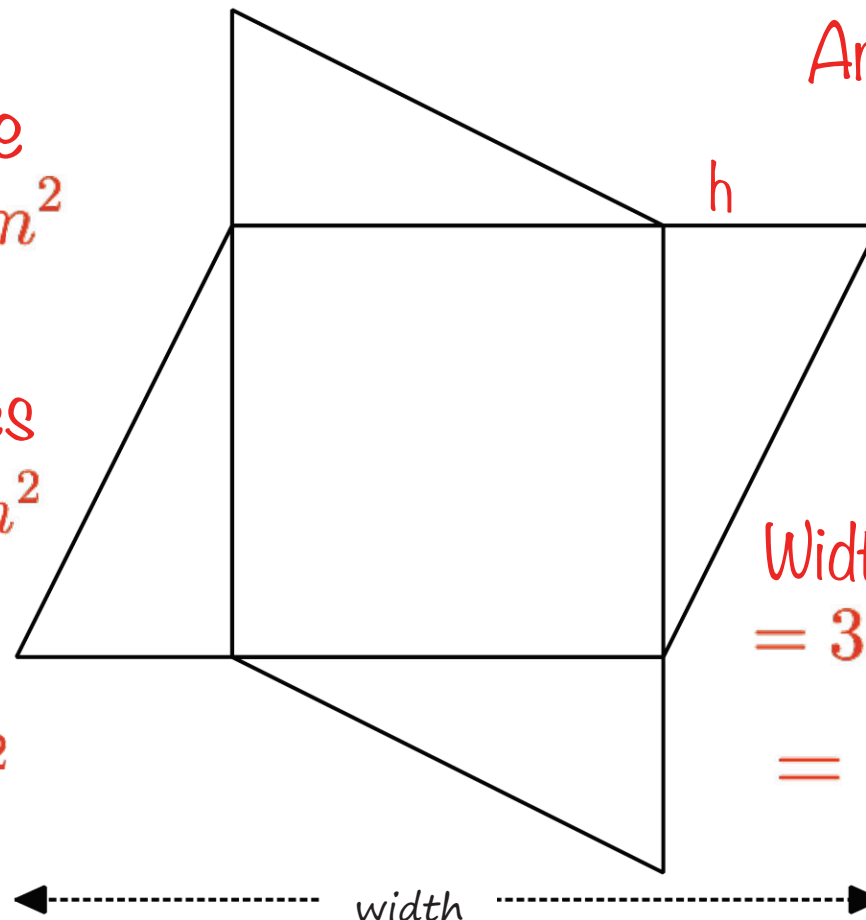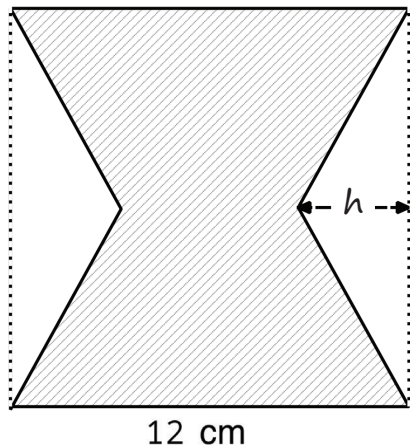
Width
$$= 3 \ cm + 8 \ cm + 3 \ cm$$
$$= 14 \ cm$$

width

PROBLEM 1B

The logo shown below has a total area of 204 cm². The square has a side length of 12 cm Calculate the width of the logo.

Area of the square
$$12 \times 12$$
$$= 144 \ cm^2$$

Area of the triangles
$$204 - 144$$
$$= 60 \ cm^2$$

Area of one triangle
$$60 \div 2$$
$$= 30 \ cm^2$$

h

$$\frac{1}{2} \times 12 \times h = 30$$
$$h = 5 \ cm$$
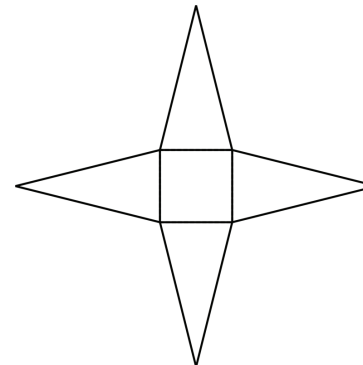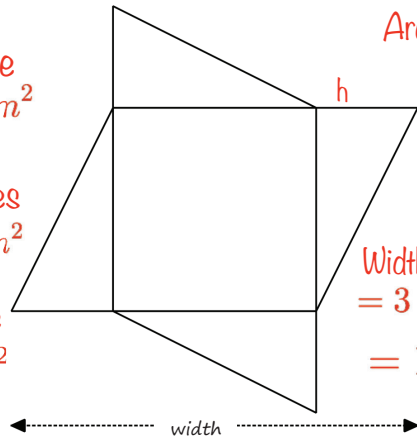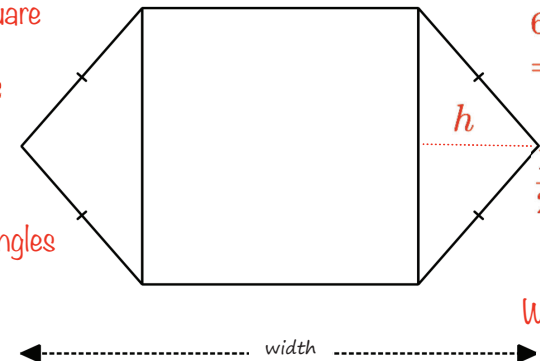
Width
$$5 + 12 + 5$$
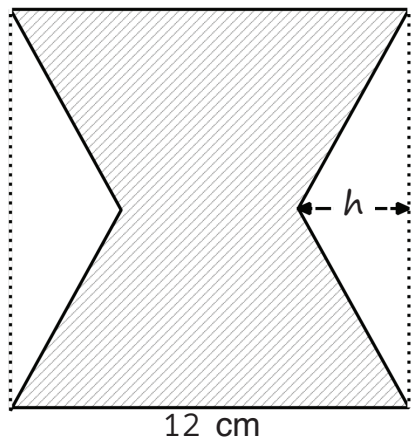$$= 22 \ cm$$

width

PROBLEM 1C

The logo shown below is a made from a square with 2 congruent isosceles triangles removed. It has a total area of 108 cm². Calculate h.

Area of the full square
$$12 \times 12$$
$$= 144 \ cm^2$$

Area of the triangles
$$144 - 108$$
$$36 \ cm^2$$

h

12 cm

Area of one triangle
$$36 \div 2 =$$
$$= 18 \ cm^2$$
$$\frac{1}{2} \times 12 \times h = 18$$
$$h = 3 \ cm$$

PROBLEM 1D

The logo shown below is a made from a square with side length 6 cm and 4 congruent isosceles. It has a total area of 156 cm². Calculate the perimeter of the logo.

Area of the square
$$= 6 \times 6$$
$$= 36 \ cm^2$$

h x

Area of the triangles
$$156 - 36$$
$$= 120 \ cm^2$$

Area of a triangle
$$= 120 \div 4$$
$$= 30 \ cm$$

$$\frac{1}{2} \times 6 \times h = 30$$
$$h = 10 \ cm$$

$$x^2 = 10^2 + 3^2$$
$$x = \sqrt{109}$$
$$= 10 \cdot 44$$

Perimeter
$$8 \times 10 \cdot 44$$
$$= 83.52 \ cm$$

R