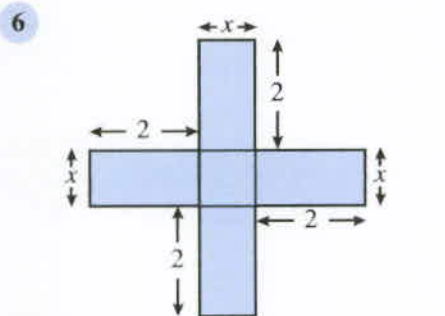
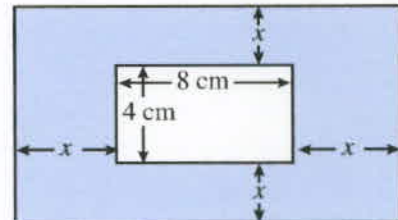


- 4 A triangle has an area of 52 cm^2 and its height is 5 cm greater than its base. If its base is x cm then:
- Write down an expression for the height in terms of x .
 - Hence write down an expression for the area of the triangle in terms of x .
 - Solve this to find x .
- 5 A right-angled triangle has a width of x cm. Its height is 7 cm more than its width. The hypotenuse is 13 cm.
- Write down an expression for the height of the triangle in terms of x .
 - Use Pythagoras' theorem to write down a quadratic equation involving x (see Unit 9 if Pythagoras' theorem not yet covered).
 - Solve this equation to find x .

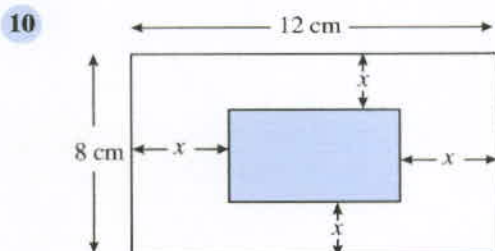


- All units are in cm. If the total area of this shape is 33 cm^2 , write down a quadratic equation involving x .
- Solve this equation to find x .

- 7
- Write down the dimensions, in terms of x , of the larger rectangle.
 - Find the area, in terms of x , of the shaded area.
 - If the shaded area is 64 cm^2 , find x .



- 8 The length of the base of a rectangular box is 3 cm longer than twice its width. The area of the base is 44 cm^2 .
- Let the width of the box = x . Write down a quadratic equation involving x .
 - Find the width of the box.
- 9 A rectangle that measures x by $x - 1$ has the same area as a rectangle that measures $x - 3$ by 10.
- Write down a quadratic equation involving x .
 - Solve this to find two possible values of x .



A piece of paper measures 12 cm by 8 cm. A strip of width x cm is cut off from each side. The area (shaded) is now 32 cm^2 .

- Find the dimensions of the new piece of paper in terms of x .
- Find the area (shaded) of the new piece of paper, in terms of x .