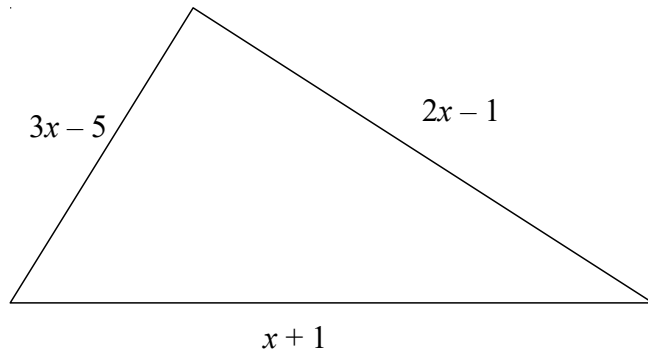


- 1 The lengths, in cm, of the sides of a triangle are  $3x - 5$ ,  $2x - 1$  and  $x + 1$



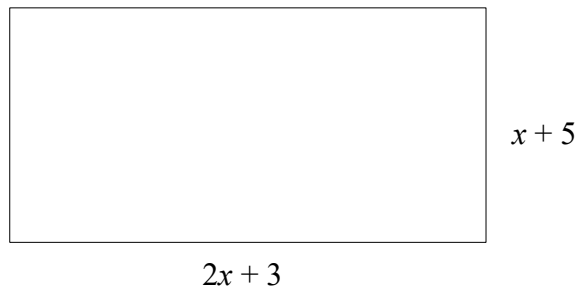
- (a) Write down an expression, in terms of  $x$ , for the perimeter of the triangle. (2)

The perimeter of the triangle is 31 cm.

- (b) Work out the value of  $x$ . (2)

**(Total for question 1 is 4 marks)**

- 2 A rectangle has a length of  $(2x + 3)$  cm and a width of  $(x + 5)$  cm.

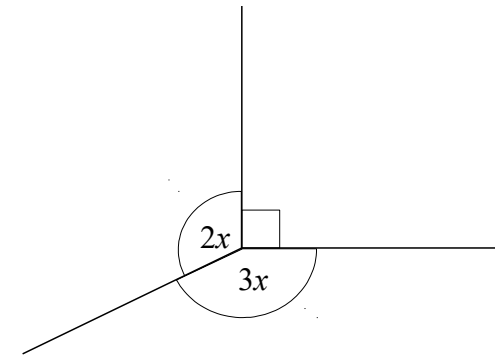


- (a) Find an expression for the perimeter of the rectangle. (2)

- (b) Given the rectangle has a perimeter of 43 cm find the value of  $x$ . (2)

**(Total for question 2 is 4 marks)**

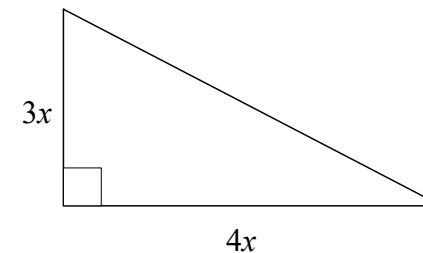
3



Find the value of  $x$ .

**(Total for question 3 is 3 marks)**

- 4 The diagram shows a right angled triangle.

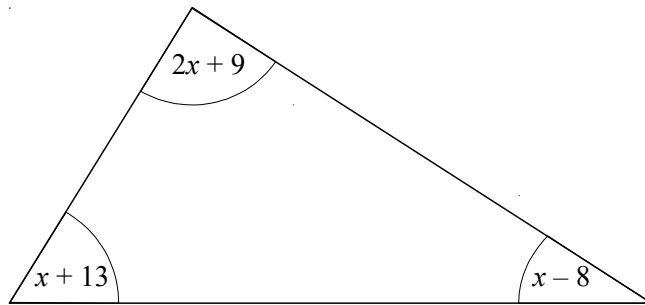


The area of the triangle is  $294 \text{ cm}^2$

Work out the value of  $x$ .

**(Total for question 4 is 3 marks)**

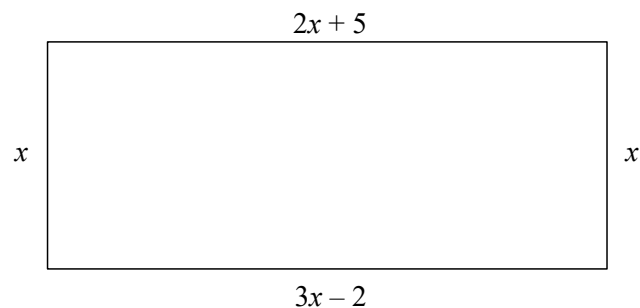
- 5 The sizes of the angles, in degrees, of a triangle are  $2x + 9$ ,  $x + 13$  and  $x - 8$



Work out the value of  $x$ .

(Total for question 5 is 3 marks)

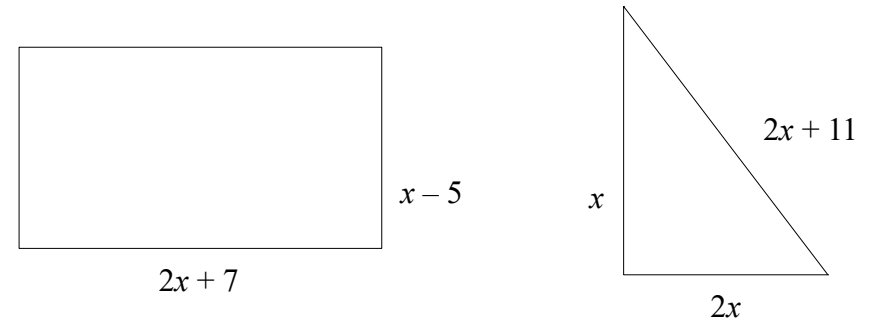
- 6 The diagram shows a rectangle.  
All measurements are in centimetres.



Find the perimeter of the rectangle.

(Total for question 6 is 3 marks)

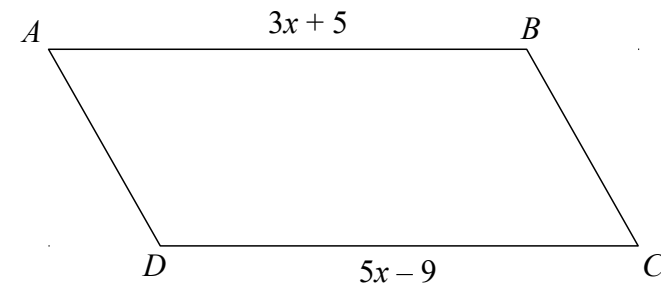
- 7 The diagram shows a rectangle and a triangle.



The perimeter of the rectangle is equal to the perimeter of the triangle.  
Find the value of  $x$ .

(Total for question 7 is 3 marks)

- 8

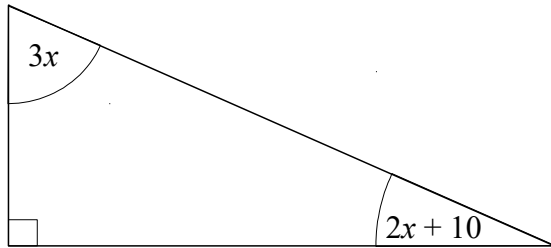


$ABCD$  is a parallelogram  
All measurements are in centimetres.  
The perpendicular height of the parallelogram is 5 cm.

Find the area of  $ABCD$

(Total for question 8 is 4 marks)

- 9 The diagram shows a right-angled triangle.  
All of the angles are in degrees.



Find the value of size of the smallest angle in the triangle.

**(Total for question 9 is 3 marks)**

- 10 Adam has some marbles.  
Bradley has twice as many marbles as Adam.  
Chris has 5 more marbles than Bradley.

In total they have 55 marbles.

How many marbles does Chris have?

**(Total for question 10 is 3 marks)**

- 11 The size of the largest angle in a triangle is three times the size of the smallest angle.  
The other angle is  $35^\circ$  more than the smallest angle.

Work out, in degrees, the size of each angle in the triangle.  
You must show your working.

**(Total for question 11 is 5 marks)**

- 12 Lucy is three times as old as Alex.  
Lucy is 7 years older than Megan.  
The sum of their ages is 126.

Find the ratio of Alex's age to Lucy's age to Megan's age.

**(Total for question 12 is 4 marks)**