

Name: _____

ASM Tuition Academy
Forming and Solving Equations

Instructions:

- * Use blank ink or ball point pen.
- * Answers all Questions
- * Answers the Questions in the space provided
- * Diagrams are not accurately drawn, unless otherwise indicated
- * you must show all your working out

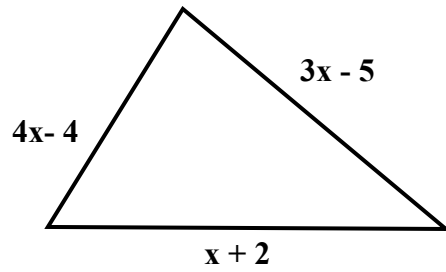
Information:

- * the mark for each questions are shown in brackets
- use this as a guide as to how much time to spend on each question

Advise:

- * Read each question carefully before you start to answer it
- * Keep an eye on the time
- * Try to answer every question
- * Check your answers if you have time at the end

1. The length, in cm, of the sides of a triangle are $4x - 4$, $3x - 5$ and $x + 2$.



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

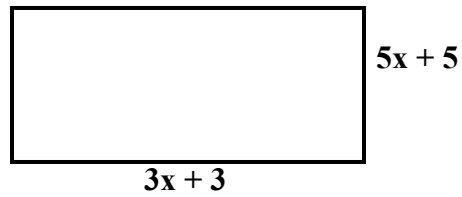
_____ cm

- The perimeter of the triangle is 41 cm.
b) Work out the value of x .

_____ cm

(Total for question 1 is 4 marks)

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



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

_____ cm

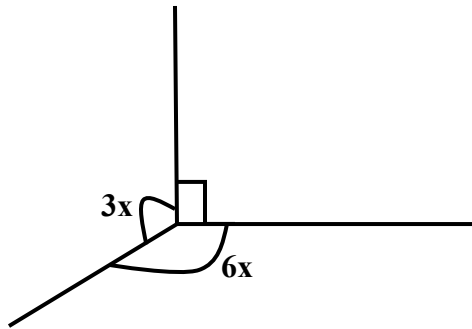
(2)

- b) Given the rectangle has a perimeter of 55 cm find the value of x .

_____ cm

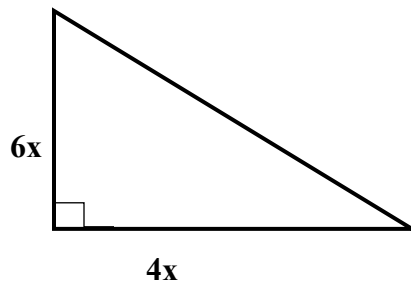
(Total for question 2 is 4 marks)

3. Find the value of x .



(Total for question 3 is 3 marks)

4. The diagram shows a right angled triangle.

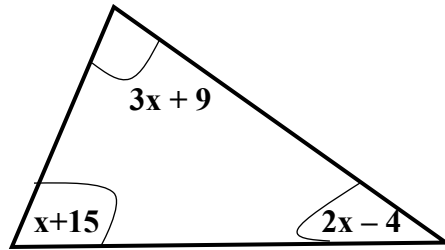


The area of the triangle is 192cm^2
Work out the value of x .

_____ cm

(Total for question 4 is 3 marks)

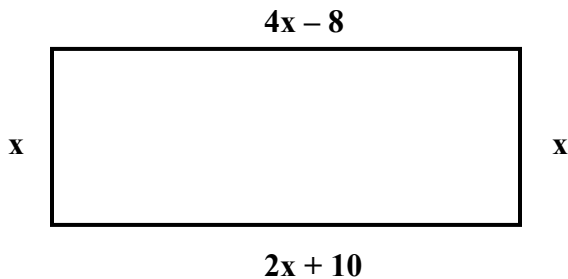
5. The sizes of the angles, in degrees, of a triangle are $3x + 9$, $x + 15$ and $2x - 4$.



Work out the value of x .

(Total for question 5 is 3 marks)

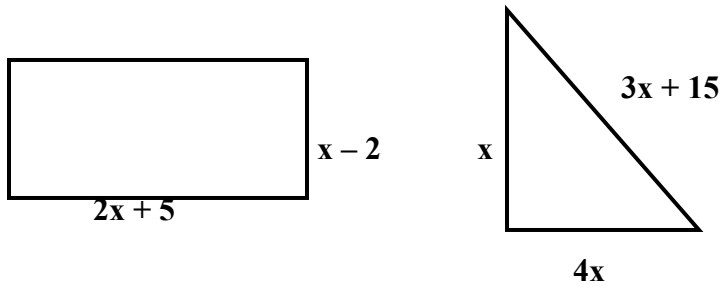
6. The diagram shows a rectangle.
All measurements are in centimeters.



Find the perimeter of the rectangle.

_____ cm
(Total for question 6 is 3 marks)

7. The diagram shows a rectangle and a triangle.

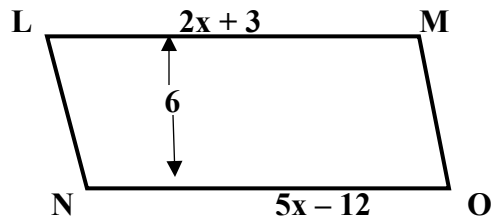


The perimeter of the rectangle is equal to the perimeter of the triangle.

Find the value of x .

(Total for question 7 is 3 marks)

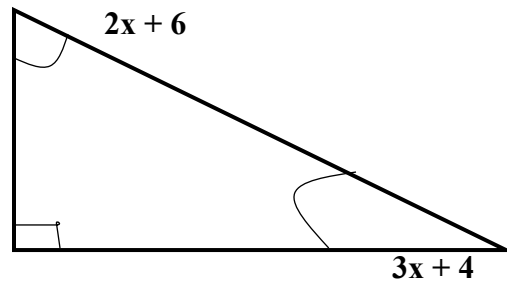
8. LMNO is a parallelogram.
All measurements are in centimeters.
The perpendicular height of the parallelogram is 8cm.



Find the area of LMNO.

(Total for question 8 is 4 marks)

9. The diagram shows a right-angled triangle.
All angles are in degrees.
Find the value of size of the smallest angle in the triangle.



(Total for question 9 is 3 marks)

10. Harry have some stones.
Babar has a thrice as many stones are Harry.
Asif has 4 more stones than Babar.
In total they have 60 stones.
How many stones does Babar and Asif have?

(Total for question 10 is 3 marks)

- 11. The size of the largest angle in a triangle is four times the size of the smallest angle.
The other angle is 42° 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. Sharukh is four times as old as Maria.
Sharukh is 3 years older than Alexa.
The sum of their ages is 24.**

Find the ratio of Maria's age to Sharukh's age to Alexa's age.

(Total for question 12 is 4 marks)
