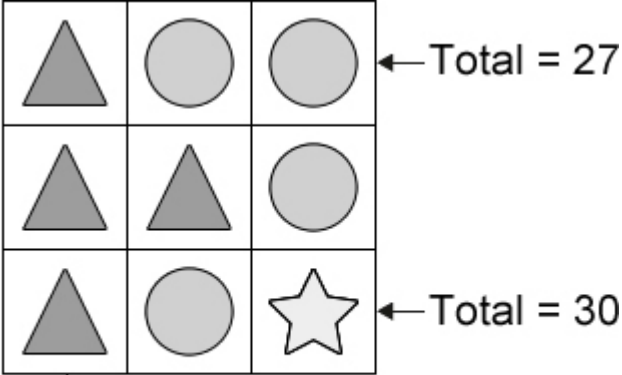



1.


Each shape stands for a number.




↑  
Total = 45

Work out the **value** of each shape.

 =

 =

 =

1 mark

2.  $a$  and  $b$  each represent a whole number between 1 and 10

$$2a + b = 8$$

Write the three possible combinations of  $a$  and  $b$   
One is done for you.

when  $a =$    $b =$

when  $a =$    $b =$

when  $a =$    $b =$

2 marks

3.

Write the missing numbers so that  $2a + 5b = 30$

One is done for you.

$2a + 5b = 30$  when  $a = 0$  and  $b = \underline{6}$

$2a + 5b = 30$  when  $a = 5$  and  $b = \underline{\hspace{2cm}}$

1 mark

$2a + 5b = 30$  when  $a = 15$  and  $b = \underline{\hspace{2cm}}$

1 mark

4.

A, B and C stand for three different numbers.

The mean of A and B is 40

The mean of B and C is 35

$A + B + C = 100$

Calculate the values of A, B and C.

Show your method

A =	B =	C =
-----	-----	-----

2 marks

5.

Find the value of  $t$  in this equation.

$$33 - 8t = 15$$

Show your method

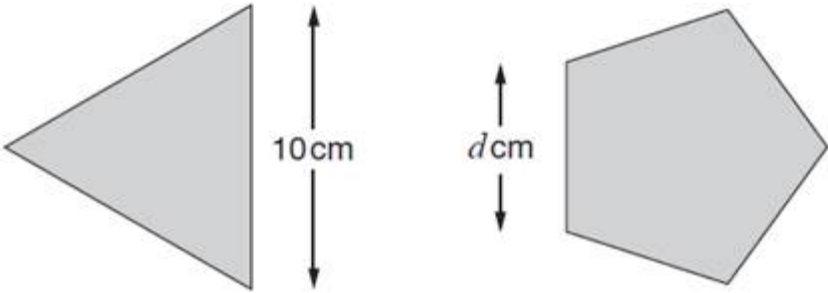
--

2 marks

6.

Here are an equilateral triangle and a regular pentagon.

Not actual size



Each side of the triangle is 10 cm  
Each side of the pentagon is  $d$  cm

The perimeter of the pentagon is 4 centimetres more than the perimeter of the triangle.

What number does  $d$  represent?

Show your method

A large grid for showing the solution method. The grid is 20 units wide and 10 units high. On the left side, there is a rounded rectangular box containing the text 'Show your method'. At the bottom right of the grid, there is a smaller rectangular box, approximately 6 units wide and 2 units high, which is currently empty.

2 marks