A034 Linear equations

Q1.

(a) Solve $t + t + t = 12$

$t =$ .....

(1)

(b) Solve $x - 2 = 6$

$x =$ .....

(1)

(c) Solve $6w + 2 = 20$

$w =$ .....

(2)

(Total for question = 4 marks)

Q2.

(a) Expand $2a(a + 7)$

.....

(1)

(b) Factorise $14b - 7$

.....

(1)

(c) Solve $9(c - 6) = 63$

c = ...

(2)

(d) Simplify $3y^2 \times 4y^3$

.....

(1)

(Total for question = 5 marks)

Q3.

$P = 4x + 3y$

$x = 5$
$y = -2$

(a) Work out the value of P.

.....

(2)

(b) Expand $4e(e + 2)$

.....

(2)

(c) Solve $3(m - 4) = 21$

..... m

(2)

(Total for question = 6 marks)

Q4.

Solve $5x - 6 = 3(x - 1)$

x = ...

(Total for question = 3 marks)

Q5.

$x - 1 = 2$

Work out the value of $2x^2$

.....

(Total for question = 3 marks)

Q6.

(a) Solve $3(x - 4) = 12$

$x =$ .....

(2)

(b) Factorise fully $9b - 3b^2$

.....

(2)

(Total for question = 4 marks)

Q7.

(a) Solve $4c + 5 = 11$

$c =$ .....

(2)

(b) Solve $5(e + 7) = 20$

$e =$ .....

(2)

(c) Simplify $(m^3)^2$

.....

(1)

(Total for question is 5 marks)

Q8.

Solve $\frac{5-x}{2} = 2x - 7$

x=.....

(Total for question = 3 marks)

Q9.

Kiaria is 7 years older than Jay.
Martha is twice as old as Kiaria.
The sum of their three ages is 77

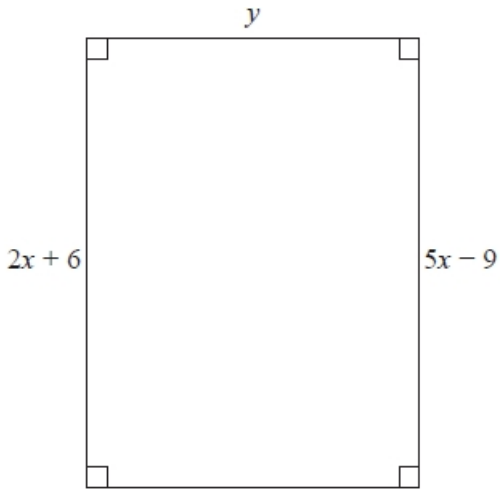
Find the ratio of Jay's age to Kiaria's age to Martha's age.

.....

(Total for question = 4 marks)

Q10.

Here is a rectangle.



All measurements are in centimetres.

The area of the rectangle is 48 cm^2.

Show that $y = 3$

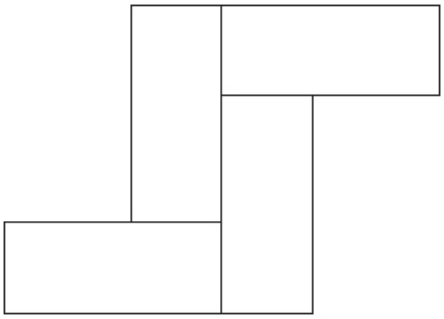
(Total for question = 4 marks)

Q11.

Here is a rectangle.

The length of the rectangle is 7 cm longer than the width of the rectangle.

4 of these rectangles are used to make this 8-sided shape.



The perimeter of the 8-sided shape is 70 cm.

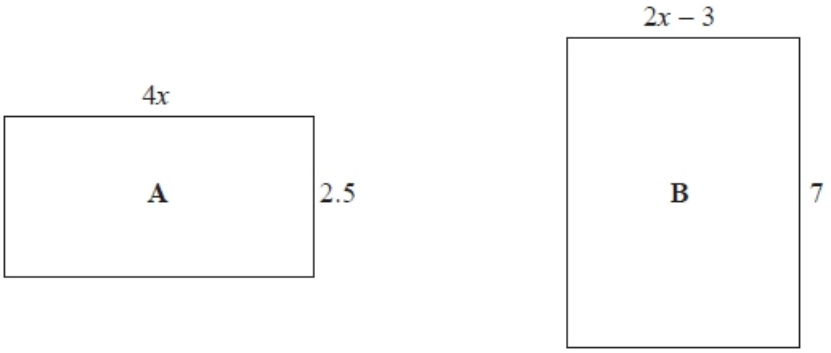
Work out the area of the 8-sided shape.

..... cm^2

(Total for question = 5 marks)

Q12.

Here are two rectangles.



All measurements are in centimetres.

The area of rectangle **A** is equal to the area of rectangle **B**.

Work out the perimeter of rectangle **B**.

..... cm

(Total for question = 5 marks)

Q13.

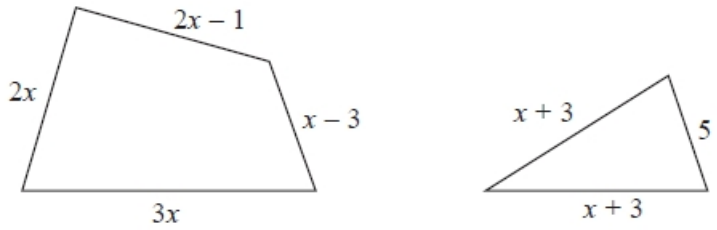
The size of the largest angle in a triangle is 4 times the size of the smallest angle.
The other angle is 27° less than the largest angle.

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

..... ° , ... ° , ... °

(Total for question = 5 marks)

Q14.



In the diagram all measurements are in centimetres.

The perimeter of the quadrilateral is twice the perimeter of the triangle.

Work out the perimeter of the quadrilateral.

..... cm

(Total for question = 4 marks)