Q1.

(a)   Solve $5w - 11 = 24$

....

....

$w =$ ....

(2)

(b)   Write an expression for the total cost, in pounds, of

   x jumpers at £15 each
          and
   y shirts at £12 each.

....

Answer ....

(1)

(c)   Simplify $x + x + y \times y$

....

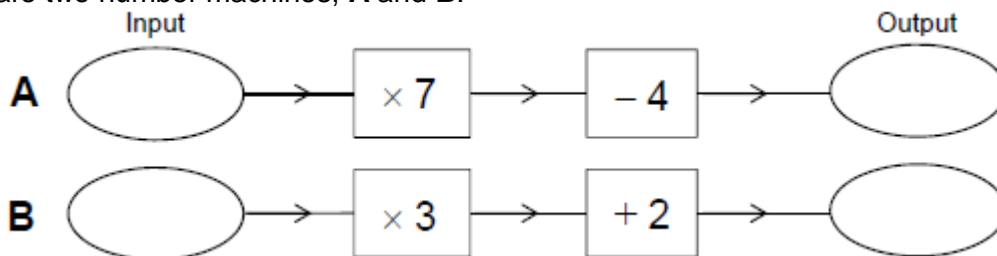Answer ....

(1)

(Total 4 marks)

Q2.

Here are two number machines, **A** and **B**.

Both machines have the same input.

Work out the input that makes

the output of **A** three times the output of **B**.

....

....

....

....

....

....

Answer ....

(Total 4 marks)

Q3.

Solve $4(x + 5) = 15$

....

....

....

....

$x = $ ....

(Total 3 marks)

Q4. Solve $8x - 10 = 30$

....

....

$x = $ ....

(Total 2 marks)

Q5. The diagram shows a square with area 64 cm².

Not drawn accurately

$(5x - 2)$ cm

$(9 - y)$ cm
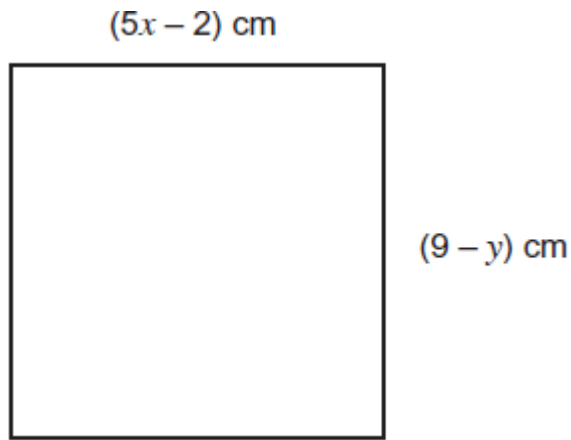
Work out the values of x and y.

....

....

....

....

....

....

....

....

$x = $ ....

$y = $ ....

(Total 4 marks)

Q6.(a)   Solve $x - 7 = 18$

....

$x = $ ....

(1)

(b)   Write an equation which has 8 as its solution.

....

Answer ....

(1)

(c)   The solution to $2x + a = b$ is $x = 5$

Work out **one** possible pair of values for a and b.

....

....

....

$a =$ .... $b =$ ....

(2)
(Total 4 marks)

Q7.(a)   Simplify fully $3a + 4b + a - 2b$

....

Answer ....

(2)

(b)   Solve $4x - 7 = 11$

....

....

$x =$ ....

(2)
(Total 4 marks)

Q8.

(a) Simplify $2a + 3a + 4a$

Answer ....

(1)

(b) Solve $x + 4 = 9$

$x = $ ....

(1)

(c) Solve $3x = 18$

$x = $ ....

(1)

(d) Solve $\dfrac{x}{10} = 2$

$x = $ ....

(1)
(Total 4 marks)

Q9.

In the table, a, b and c represent numbers.
The total for each row is given.

Work out the **numbers** for the column totals.

			Row totals
a	a	a	12
b	b	a	24
$2a$	$2c$	b	30

Column totals | | | |

(Total 4 marks)

Q10.

(a)   You are given that $p = m + 5$

Which **one** of the following is true?
Circle your answer.

$m = p + 5$ $m + p = 5$ $m = 5 - p$ $m = p - 5$

(1)

(b)   Solve $2c - 3 = 13$

....

....

$c = $ ....

(2)
(Total 3 marks)

Q11.

Chocolate bars cost £x each.

(a)   Mary buys 6 chocolate bars.
She pays with a £10 note.

Write down an expression for the change she receives.

....

£ ....

(1)

(b)   Ben buys 4 chocolate bars.
He also pays with a £10 note.

Ben receives twice as much change as Mary.

Use an algebraic method to work out the value of x.

....

....

....

....

x = ...

(4)
(Total 5 marks)

Q12.

Anika, Beth and Carmen each buy some bags of sweets.
Each bag contains x sweets.

•   Anika buys 7 bags.

•   Beth buys 5 bags.

•   Carmen buys 2 bags.

Anika

I give Carmen 42 of my sweets.

Beth

I give Carmen 6 of my sweets.

Carmen

Now we all have the same number of sweets.

Work out the value of x.
You **must** show your working.
Do **not** use trial and improvement.

....

....

....

....

....

....

....

....

x = ...

(Total 5 marks)

Q13.(a)   Simplify $2f + 3e + 4f$

....

Answer ....

(1)

(b)   Solve $x - 7 = 29$

....

x = ...

(1)
(Total 2 marks)

Q14. The length of a rectangle is x cm

The width of the rectangle is 3 cm less than the length.

(a)   Write down an expression for the width of the rectangle in terms of x.

Answer .... cm

(1)

(b)   The perimeter of the rectangle is 40 cm

Set up and solve an equation to work out the length of the rectangle.

....

....

)

....

....

....

Answer .... cm

(4)
(Total 5 marks)