

1. Solve

May 08 4H

(a) $6x + 13 = 2x + 7$

$x = \dots\dots\dots$ (3)

(b) $\frac{y}{5} - 2 = 4$

$y = \dots\dots\dots$ (2)

(Total 5 marks)

Q1

9. (a) Expand and simplify fully $2(w - 3) + 3(w + 5)$

NOV 09 3H

$\dots\dots\dots$ (2)

(b) Solve the equation $\frac{x+5}{3} = 9$

$x = \dots\dots\dots$ (2)

Leave blank

9. Solve $\frac{12-x}{3} = 7$

May 09 4H

$x = \dots\dots\dots$

(Total 3 marks)

Leave blank

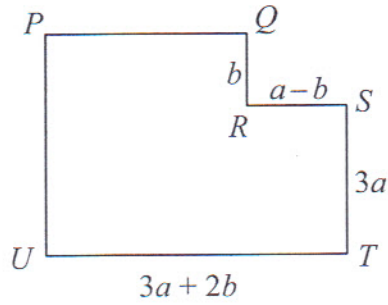
Q9

1. The diagram shows a shape, $PQRSTU$.

Nov 08 41

All the corners are right angles.

The lengths of four of the sides are given in terms of a and b .



Find an expression, in terms of a and b , for

(i) PU ,

.....

(ii) PQ .

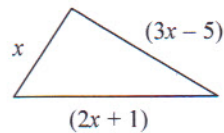
.....

(Total 3 marks)

Q1

1. The diagram shows the lengths, in cm, of the sides of a triangle.

May 07 41



The perimeter of the triangle is 17 cm.

(i) Use this information to write an equation in x .

.....

(ii) Solve your equation.

$x =$

(Total 3 marks)

Q1

NOV 09 3H

- 5. Cups cost x dollars each.
Mugs cost $(x + 2)$ dollars each.

(a) Write down an expression, in terms of x , for the total cost of 12 cups and 6 mugs.

..... dollars
(2)

(b) The total cost of 12 cups and 6 mugs is 57 dollars.
Work out the cost of 1 cup.

..... dollars
(2)

(Total 4 marks)

Q5

(b) Solve $\frac{2}{y+4} = 3$

You must show sufficient working.

NOV 08 4H

$y =$
(2)

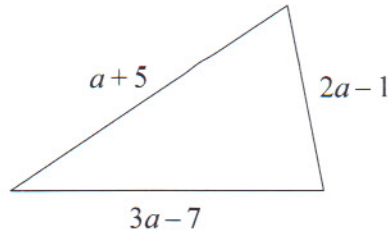
(Total 5 marks)

Q13

13.

May 04 4H

Leave blank



The lengths, in cm, of the sides of a triangle are $(a+5)$, $(3a-7)$ and $(2a-1)$.
The perimeter of the triangle is 24 cm.
Work out the value of a .

$a = \dots\dots\dots$

(Total 3 marks)

Q13

3. The word formula gives the time, in minutes, needed to cook a turkey.

May 04 4H

$$\text{Time} = 40 \times \text{weight in kg} + 20$$

A time of T minutes is needed to cook a turkey with a weight of W kg.

Write down a formula for T in terms of W .

$\dots\dots\dots$

(Total 2 marks)

Q3

11. Solve $4(x-3) = 7x - 10$

May 04 4H

$x = \dots\dots\dots$

(Total 3 marks)

Q11

(b) Solve $8 - 5x = 2$

Nov 09 4H

$x = \dots\dots\dots$

(3)

Q2

(Total 5 marks)

9. (a) Solve $5x - 4 = 2x + 7$

May 07 3H

$x = \dots\dots\dots$

(2)

(b) Solve $\frac{7-2y}{4} = 2y+3$

$y = \dots\dots\dots$

(4)

Q9

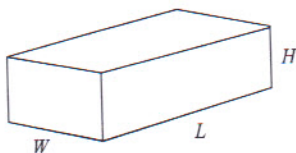
(Total 6 marks)

Leave
blank

May 09 31

Leave blank

13. Here is a cuboid with length L , width W and height H .



The total surface area, A , of the cuboid is given by the formula

$$A = 2(LW + HW + HL)$$

- (a) $A = 70$ $W = 4$ $H = 2$
Work out the value of L .

$L = \dots\dots\dots$
(3)

- (b) Make W the subject of the formula $A = 2(LW + WH + HL)$

$W = \dots\dots\dots$
(4)

Q13

(Total 7 marks)

Leave blank

May 08 31

9. (a) Solve $7(x - 1) = 5 - 2x$
You must show sufficient working.

$x = \dots\dots\dots$
(3)

11. Make a the subject of $P = \sqrt{ab}$

NOV 09 3H

$a = \dots\dots\dots$

(Total 2 marks)

Q11

20. Make R the subject of the formula $A = \pi(R + r)(R - r)$

May 06 3H

$R = \dots\dots\dots$

(Total 4 marks)

Leave blank

Q20

15. Make v the subject of the formula $m(v - u) = I$

NOV 04 4H

$v = \dots\dots\dots$

(Total 3 marks)

Q15

NOV 08 4H

6. (a) Multiply out $5(x - 2)$

.....
(2)

(b) Solve the equation $\frac{x}{4} + 3 = 10$

You must show sufficient working.

$x =$
(2)

2. Solve $8y - 9 = 5y + 3$

NOV 09 3X

$y =$

(Total 3 marks)

Q2

2. Solve $5x - 3 = 2x - 1$

NOV 04 4H

$x =$

(Total 3 marks)

Q2

2. Solve $5(2x + 3) = 30$

May 05 3H

$x = \dots\dots\dots$

(Total 3 marks)

Q2

8. $y = 4x - 1$

Nov 06 4H

Work out the value of x when $y = -7$

$x = \dots\dots\dots$

(Total 2 marks)

Q8

11. Make W the subject of the formula $h = \sqrt{\frac{W}{I}}$

May 05 3H

$W = \dots\dots\dots$

(Total 2 marks)

Q11

2. Solve $7 - 4x = 10$

May 06 3H

$x = \dots\dots\dots$

(Total 3 marks)

Q2

1. Solve the equation

May 05 4H

$$3p + 5 = 7p + 3$$

$p = \dots\dots\dots$

(Total 3 marks)

Q1

3. Solve $5(x - 4) = 35$

May 07 4H

Leave blank

$x = \dots\dots\dots$

(Total 3 marks)

Q3

11. Solve $\frac{5x+4}{3} = 2$

Nov 05 3H

$x = \dots\dots\dots$

(Total 3 marks)

Q11

Nov 06 3H

2. Rectangular tiles have width x cm and height $(x + 7)$ cm.

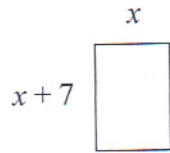


Diagram NOT accurately drawn

Some of these tiles are used to form a shape. The shape is 6 tiles wide and 4 tiles high.

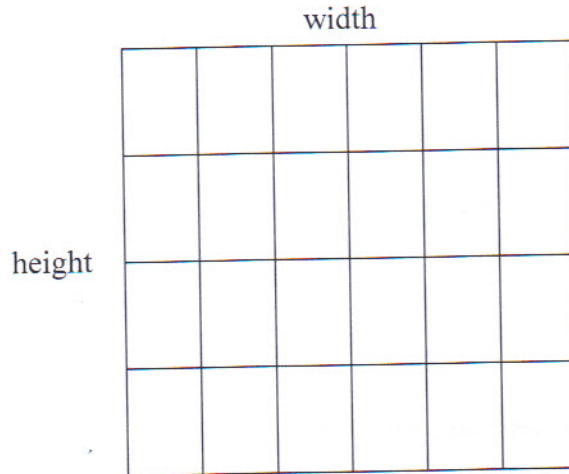


Diagram NOT accurately drawn

(a) Write down expressions, in terms of x , for the width and height of this shape.

width = cm

height = cm
(2)

(b) The width and the height of this shape are equal.

(i) Write down an equation in x .

.....

(ii) Solve your equation to find the value of x .

$x = \dots\dots\dots$
(4)

(Total 6 marks)

Q2



17.

NOV 09 4H

$$T = \frac{n(1+e)}{(1-e)}$$

- (a) Work out the value of T when $n = 8.6$ and $e = 0.2$

$$T = \dots\dots\dots (2)$$

- (b) Make e the subject of the formula $T = \frac{n(1+e)}{(1-e)}$

$$e = \dots\dots\dots (5)$$

(Total 7 marks)

Q17

