

Year 10 H Topic Assessment 1 Follow-up Homework

Name _____

Calculator Questions

Q1.

(a) Solve $3(2p - 7) = 27$

$p = \dots\dots\dots$
(3)

(b) Solve $7x - 8 = 3x + 14$

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

(Total for Question is 6 marks)

Q2.

m is an integer such that $-5 < m \leq 2$

(a) Write down all the possible values of m .

.....
(2)

(b) Solve $5x - 8 < 2x + 7$

.....
(2)

(Total for Question is 4 marks)

Q3. (a) Solve

$$\frac{5w - 8}{3} = 3w + 1$$

$w = \dots\dots\dots$

(3)

(Total for Question is 3 marks)

Q4.

Simplify $\frac{x+2}{3} + \frac{x+5}{4}$

.....
(Total for Question is 3 marks)

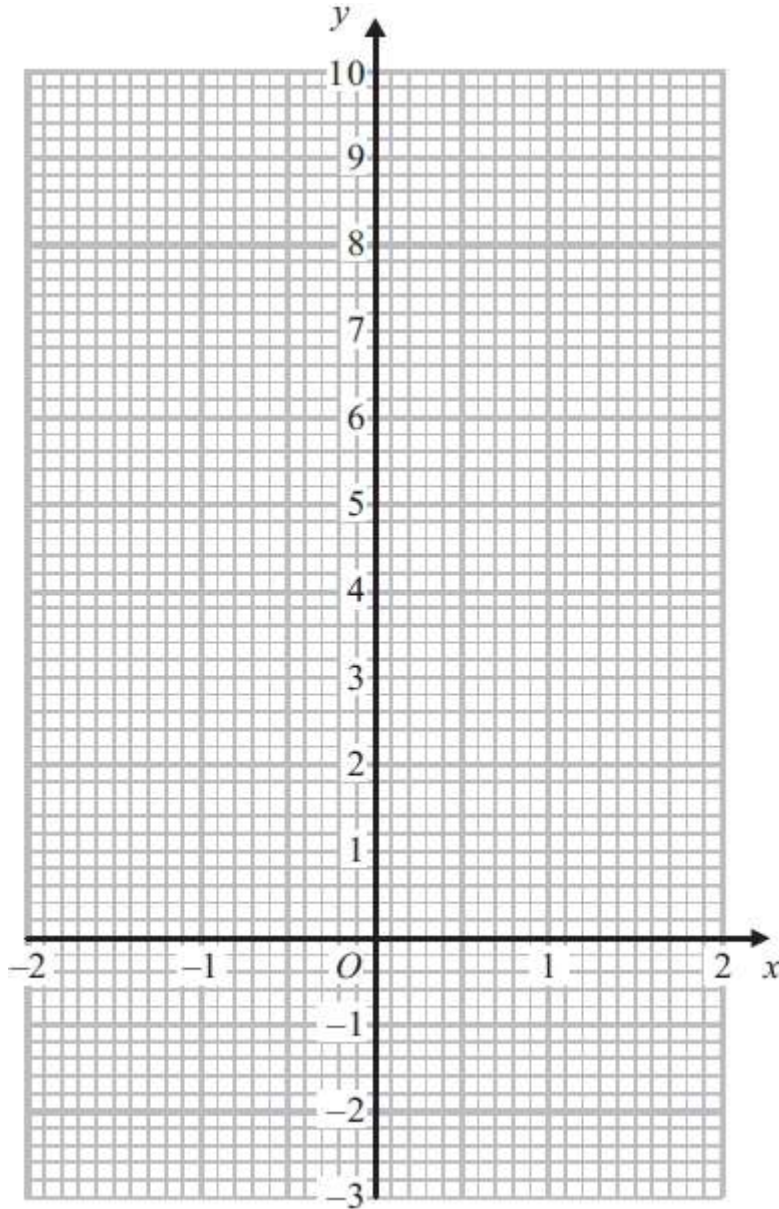
Q5.

(a) Complete the table of values for $y = 2x^2 - 3$

x	-2	-1	0	1	2
y	5			-1	

(2)

(b) On the grid below, draw the graph of $y = 2x^2 - 3$ for values of x from $x = -2$ to $x = 2$



(2)

(c) Use your graph to write down estimates of the solutions of the equation $2x^2 - 3 = 0$

.....
(2)

(Total for Question is 6 marks)

Non-Calculator Questions

Q6.

Here are the first five terms of an arithmetic sequence.

3 11 19 27 35

(a) Write down, in terms of n , an expression for the n th term of this sequence.

.....

(2)

An expression for the n th term of another sequence is $2n^2 + 1$

(b) Find the fourth term of this sequence.

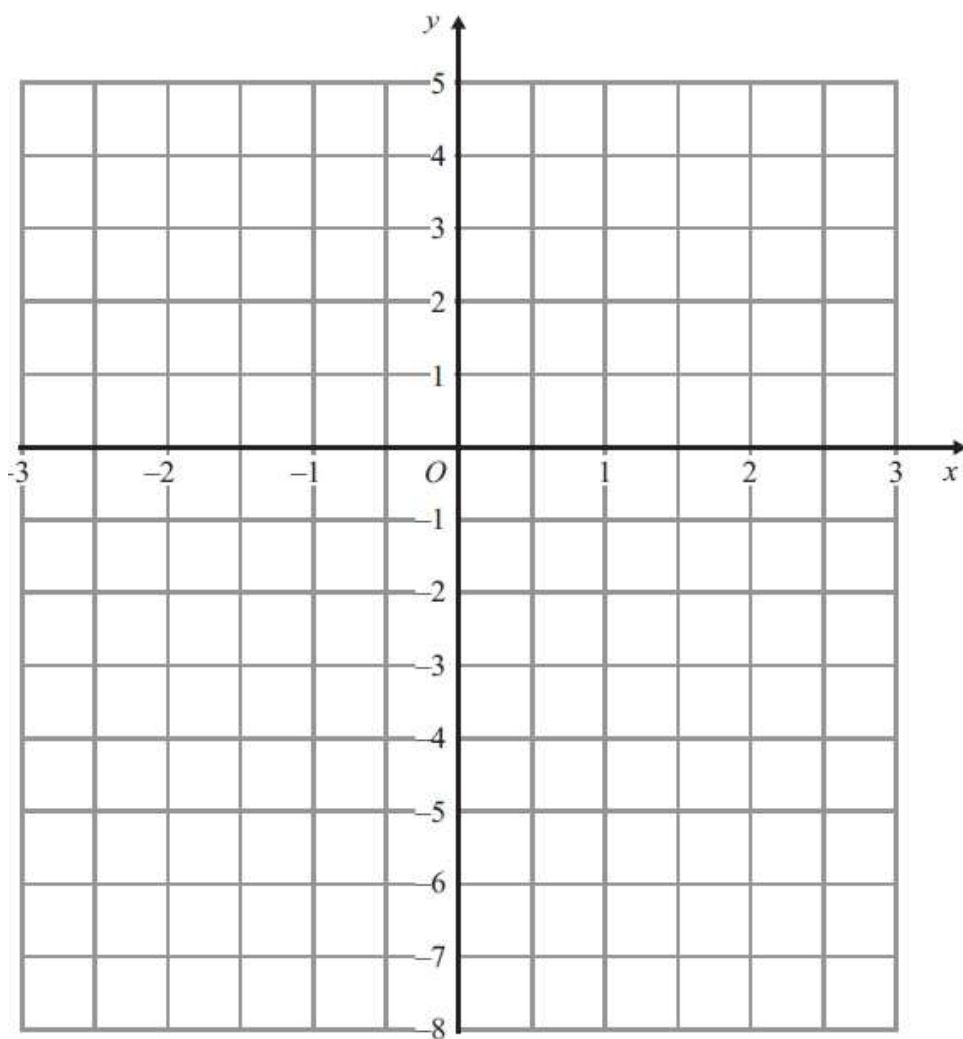
.....

(2)

(Total for Question is 4 marks)

Q7.

On the grid, draw the graph of $y = 4x - 2$ for values of x from -2 to 2



(Total for Question is 3 marks)

Q8.

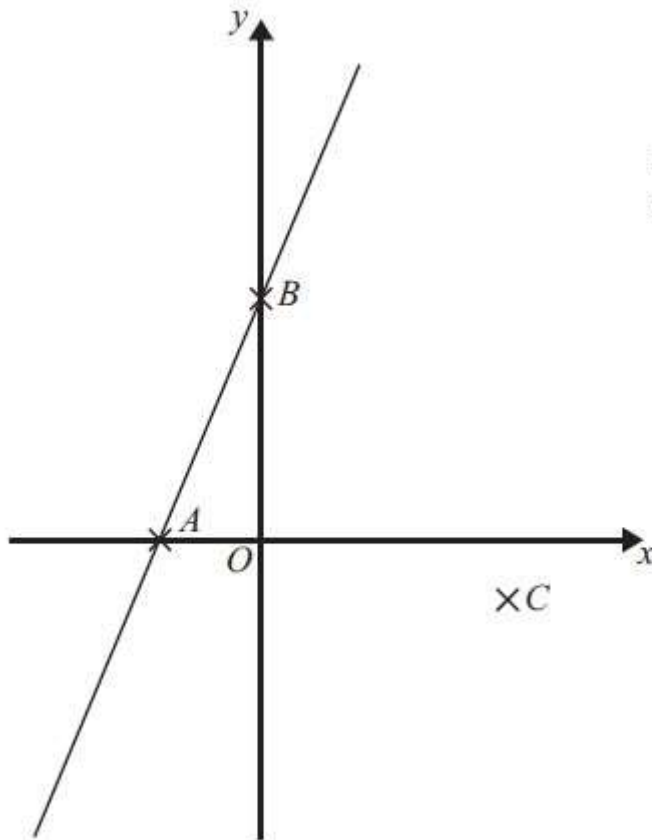


Diagram **NOT**
accurately drawn

In the diagram

A is the point $(-3, 0)$

B is the point $(0, 9)$

C is the point $(6, -1)$

Find an equation of the line that passes through C and is perpendicular to AB.

(Total for Question is 4 marks)

Q9.

(a) Expand $4(3y - 2)$

.....

(1)

(b) Factorise $x^2 - 5x$

.....

(1)

(c) Factorise completely $12x^2 + 9xy$

.....

(2)

(d) Make z the subject of the formula $m = \frac{pz}{7}$

$z = \dots\dots\dots$

(2)

(e) Expand and simplify $3(x - 5) + 2(x + 7)$

.....

(2)

(f) Expand and simplify $(x + 5)(x - 3)$

.....

(2)

(g) Factorise $x^2 - 25$

.....

(1)

(h) Factorise $x^2 + 9x + 14$

.....

(2)

(i) Expand and simplify $(2x - 4)(5x + 2)$

.....
(2)

(j) Factorise $2t^2 + 5t + 3$

.....
(2)

(k) Write as a single fraction $\frac{1}{5x} + \frac{1}{4x} - \frac{1}{2x}$

.....
(2)

(Total for Question is 19 marks)

Q10.

Make t the subject of the formula $g = \frac{5 - 3t}{6 + t}$

.....
(Total for Question is 4 marks)