Non-Calculator

Q1.

A football team has P points.

$$P = 3W + D$$

W is the number of wins
D is the number of draws

(a) A team has 6 wins and 2 draws.

How many points does the team have?

_____

_____

Answer _____

(1)

(b) After 33 games a different team has 53 points.
11 games were draws.

How many games has this team lost?

_____

_____

_____

_____

_____

_____

Answer _____

(4)

(Total 5 marks)

Q2.

Here is a formula.

$$V = \frac{1}{2}x^2h$$

Work out the value of V when $x = 11$ and $h = 6$

_____

_____

_____

_____

Answer _____

(Total 2 marks)

Q3.

Work out the value of $4(2x + 3y)$ when $x = 8$ and $y = -3$

_____

_____

Answer _____

(Total 2 marks)

Q4.

Solve $4x - 5 = 17$

_____

_____

_____

x = _____

(Total 2 marks)

Q5.

Solve $x - 3 = 0$

Circle your answer.

$x = -3$ $x = 0$ $x = \frac{1}{3}$ $x = 3$

(Total 1 mark)

Q6.

(a) Solve $x - 3 = 14$

_____

_____

$x =$ _____

(1)

(b) Solve $5y = 45$

_____

_____

$y =$ _____

(1)

(c) Solve $8 + w = 6$

_____

_____

$w =$ _____

(1)

(Total 3 marks)

Q7.

(a) Solve $5x + 3 = 3(x + 2)$

_____

_____

_____

Answer $x =$ _____

(3)

(b) $2(x + 16) + 4(x - 5)$ simplifies to $a(x + b)$

Work out the values of a and b.

_____

_____

Answer $a =$ _____ , $b =$ _____

(3)

(Total 6 marks)

Calculator

Q8.

Solve $12x = 3$

Circle your answer.

$x = -9$ $\quad x = \frac{1}{4}$ $\quad x = 4$ $\quad x = 36$

(Total 1 mark)

Q9.

Solve $4x - 3 = 14$

_____

_____

_____

$x =$ _____

(Total 2 marks)

Q10.

(a) Factorise $x2 - y2$

_____

Answer _____

(1)

(b) Solve $\frac{2x}{5} + 1 = 13$

_____

_____

_____

_____

$x =$ _____

(3)

(Total 4 marks)

Q11.

The value of x can be 2 or 5

The value of y can be 3 or 12

(a) List the possible values of xy

_____

_____

Answer _____

(2)

(b) Work out the least possible value of $\frac{x-y}{x}$

You must show your working.

_____

_____

_____

_____

_____

Answer _____

(2)

(Total 4 marks)

Q12.

Work out the value of $5x + 9y$ when $x = 7$ and $y = -2$

_____

_____

Answer _____

(Total 2 marks)

Q13.

Circle the equation which has the solution $x = 6$

$x - 3 = \frac{x}{2}$ $\quad$ $x = \frac{3+x}{2}$ $\quad$ $3x = 36$ $\quad$ $\frac{x}{6} = 0$

(Total 1 mark)

Q14.

$f(x) = x2 - x3$

Circle the value of f(−3)

18 −18 36 −36

(Total 1 mark)

Q15.

Solve $4(3x - 2) = 2x - 5$

_____

_____

_____

_____

_____

$x =$ _____

(Total 3 marks)