1) In each part, match the statement to the expression. Circle your answer.

(a) Two more than x.

$2x$ (x + 2) $x - 2$ x^2

(1)

(b) Four less than x.

$4 - x$ $4x$ $\frac{x}{4}$ (x - 4)

(1)

(c) Three times x.

(3x) $\frac{x}{3}$ $x + 3$ x^3

(1)

(d) Half of x.

$x \div 0.5$ $\frac{2}{x}$ ($\frac{x}{2}$) $2x$

(1)
(Total 4 marks)

2) Which of these can be written as $\frac{a}{b}$? Circle your answer.

$b \div a$ $a - b$ (a ÷ b) $b - a$

(Total 1 mark)

3) (a) Circle the expression that is equivalent to $4 \times m$

m^4 (4m) 4^m $m \times m \times m \times m$

(1)

(b) Circle the expression that is equivalent to $y \times y \times y$

$3y$ y^2 $3y^2$ (y^3)

(1)

(c) Circle the expression that is equivalent to $a + b$

(b + a) ab ba $2ab$

(1)
(Total 3 marks)

4) You are given that a = 3 and b = 5. Tick whether each statement is true or false. Give a reason for each answer.

Statement	True	False	Reason
$ab = 35$		✓	$3 \times 5 = 15$
$2b^2 = 100$		✓	$2 \times 5^2 = 50$

(Total 2 marks)

5) (a) Simplify fully 4x + 7y + 5x – y

Answer .....9x + 6y.....

(2)

(b) Multiply out 4(x + 3)

Answer .....4x + 12.....

(1)

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

Answer .....$x(x - 5)$.....

(1)

(Total 4 marks)

6) Here is a formula: $V = \frac{1}{2}x^2h$

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

.....$V = \frac{1}{2} \times 11^2 \times 6$.....

.....$= 3 \times 121$.....

.....$= 363$.....

Answer .....363.....

(Total 2 marks)

7) (a) Expand and simplify (x + 5)(x + 9)

.....$x^2 + 9x + 5x + 45$.....

Answer .....$x^2 + 14x + 45$.....

(2)

(b) Factorise fully $5x^2 - 10xy$

Answer .....$5x(x - 2y)$.....

(2)

(Total 4 marks)

(Total for test = 20 marks)