

FULL MODEL ANSWERS

Q1. NON-CALCULATOR

Simplify $7 \times e \times f \times 8$

$$7 \times 8 \times e \times f$$

$$\dots\dots\dots 56ef$$

(Total for question = 1 mark)

Q2. NON-CALCULATOR

(a) Simplify $x + x + x + y + y$

$$\boxed{1x} + \boxed{1x} + \boxed{1x} + \boxed{1y} + \boxed{1y}$$

$$\dots\dots\dots 3x + 2y$$

(1)

(b) Simplify $3p + 7q - p - 4q$

$$\boxed{3p} + \boxed{7q} - \boxed{1p} - \boxed{4q}$$

$$\dots\dots\dots 2p + 3q$$

(2)

(Total for question = 3 marks)

Q3. NON-CALCULATOR

(a) Simplify $3 \times 4t$

$$\dots\dots\dots 12t$$

(1)

(b) Simplify $8a - 3a + 2a$

$$\boxed{8a} - \boxed{3a} + \boxed{2a}$$

$$\dots\dots\dots 7a$$

(1)

(Total for question = 2 marks)

Q4. NON-CALCULATOR

(a) Simplify $2a \times 5b$

$$\begin{aligned} & 2 \times a \times 5 \times b \\ = & 2 \times 5 \times a \times b \end{aligned}$$

$$\dots\dots\dots 10ab$$

(1)

(b) Simplify $3x + 2y + 5x - y$

$$\boxed{3x} + \boxed{2y} + \boxed{5x} - \boxed{1y}$$

$$\dots\dots\dots 8x + y$$

(2)

(Total for question = 3 marks)

Q5. CALCULATOR ALLOWED

Simplify $a \times b \times 7$

$$7 \times a \times b$$

$$7ab$$

(Total for question = 1 mark)

Q6. CALCULATOR ALLOWED

Simplify $y + 3y - 2y$

$$1y + 3y - 2y$$

$$2y$$

(Total for question = 1 mark)

Q7. CALCULATOR ALLOWED

Simplify $8x - 3x + 2x$

$$8x - 3x + 2x$$

$$7x$$

(Total for question = 1 mark)

Q8. CALCULATOR ALLOWED

Simplify $4x - 2y + 3x - 6y$

$$4x - 2y + 3x - 6y$$

$$7x - 8y$$

(Total for question = 2 marks)

Q9. CALCULATOR ALLOWED

Simplify $7x + 2y - 3x + 4y$

$$7x + 2y - 3x + 4y$$

$$4x + 6y$$

(Total for question = 2 marks)

Q10. CALCULATOR ALLOWED

Simplify $4e + 6f + 7e - f$

$$4e + 6f + 7e - f$$

$$11e + 5f$$

(Total for question = 2 marks)

Q11. CALCULATOR ALLOWED

Simplify $3cd + 2cd - cd$

$$3cd + 2cd - 1cd$$

$$4cd$$

(Total for question = 1 mark)

Q12. CALCULATOR ALLOWED

(a) Simplify $5f - f + 2f$

$$5f - 1f + 2f$$

$$6f$$

(1)

(b) Simplify $2 \times m \times n \times 8$

$$2 \times 8 \times m \times n$$

$$16mn$$

(1)

(c) Simplify $t^2 + t^2$

$$1t^2 + 1t^2$$

$$2t^2$$

(1)

(Total for question is 3 marks)

Q13. CALCULATOR ALLOWED

(a) Simplify $3f \times 5g$

$$3 \times 5 \times f \times g$$

$$15fg$$

(1)

(b) Simplify $t \times t$

$$t^2$$

(1)

(c) Simplify $\frac{2n + 6n}{2}$

$$\frac{2n + 6n}{2}$$

$$= \frac{8n}{2}$$

$$4n$$

(1)

(Total for question = 3 marks)

Q14. CALCULATOR ALLOWED

(a) Simplify $y^3 + y^3$

$$1y^3 + 1y^3$$

$$2y^3$$

(Total for question = 1 mark)

Q15. CALCULATOR ALLOWED

(a) Simplify $3m - m - m + 3m$

$$\boxed{3m} - \boxed{1m} - \boxed{1m} + \boxed{3m}$$

$$\dots\dots\dots 4m$$

(1)

(b) Simplify $2 \times n \times p \times 4$

$$2 \times 4 \times n \times p$$

$$\dots\dots\dots 8np$$

(1)

(Total for question = 2 marks)

Q16. CALCULATOR ALLOWED

(a) Simplify $5p - 3p + p$

$$\boxed{5p} - \boxed{3p} + \boxed{1p}$$

$$\dots\dots\dots 3p$$

(1)

(b) Simplify $m^3 + m^3$

$$1m^3 + 1m^3$$

$$\dots\dots\dots 2m^3$$

(1)

(c) Simplify $10 + 3c + 5d - 7c + d$

$$10 + \boxed{3c} + \boxed{5d} - \boxed{7c} + \boxed{d}$$

$$\dots\dots\dots 10 - 4c + 6d$$

(2)

(Total for question = 4 marks)