1 (a) Simplify $w + w + w + w - w$

....
(1)

(b) Simplify $4 \times a \times 2$

....
(1)

(c) Simplify $f \times f \times f \times f \times f$

....
(1)

(d) Simplify $4c + 4h + 5c - 6h$

....
(2)

(e) Factorise $10d + 15$

....
(1)

(f) Make t the subject of $e = 7t + g$

....
(2)

(Total for Question 1 is 8 marks)

2   (a) Simplify $5c \times d$

....
(1)

(d) Simplify $8k + 5m - 2k + 6m$

....
(2)

(Total for Question 2 is 3 marks)

3 (a) Simplify $g^6 \times g^4$

....
(1)

(b) Simplify $(3cd^4)^2$

....
(2)

(Total for Question 3 is 3 marks)

4 (a) Simplify $3r \times 5t$

....

(1)

(Total for Question 4 is 1 marks)

5 (d) Simplify fully $\dfrac{n^4 \times n^7}{n^5}$

....

(2)

(Total for Question 5 is 2 marks)

6 (c) Simplify $(4pq^2)^3$

....

(2)

(Total for Question 6 is 2 marks)

7 (a) Simplify $6m - 2k + 5m - k$

....

(2)

(Total for Question 7 is 2 marks)

8 (a) Simplify $10a \times b$

....

(1)

(Total for Question 8 is 1 marks)

9 (a) Simplify $3 \times 10d$

....

(1)

(b) Simplify $8e + e - 5e$

....

(1)

(Total for Question 9 is 2 marks)

10   (a) Simplify $w \times w \times w \times w \times w$

....
(1)

(b) Simplify $5a \times 3c$

....
(1)

(c) Simplify $3e + 2f - e + 5f$

....
(2)

(d) Solve $5x - 7 = x + 12$
Show clear algebraic working.

$x =$ ....
(3)

(Total for Question 10 is 7 marks)

11 (a) Simplify $a \times a \times a \times a$

....
(1)

(b) Simplify $4b \times 5c$

....
(1)

(c) Simplify $6d + 2e + d - 5e$

....
(2)

(Total for Question 11 is 4 marks)

12 (a) Simplify $(3k^2)^4$

....

(2)

(b) Simplify $(21m^4n) \div (3n^{-5})$

....

(2)

(Total for Question 12 is 4 marks)

13 (a) Simplify $10x + 4y + 3x - 6y$

....
(2)

(Total for Question 13 is 2 marks)

14 (a) Simplify $(2x^3y^5)^4$

....

(2)

(Total for Question 14 is 2 marks)

15 (a) Simplify $6p + 2t + p - 3t$

....

(2)

(Total for Question 15 is 2 marks)

16 (a) Simplify $a \times a \times a \times a \times a$

....

(1)

(b) Simplify $8b \times 3c$

....

(1)

(Total for Question 16 is 2 marks)

17   (a) Simplify $12a + 3a - 7a$

....
(1)

(b) Simplify $8 \times 3b$

....
(1)

(c) Solve $\dfrac{c}{3} = 9$

$c =$ ....
(1)

(Total for Question 17 is 3 marks)

18 (a) Simplify $12g - 8e - 5g + 6e$

....

(2)

(Total for Question 18 is 2 marks)

19 (a) Simplify $c \times c \times c \times c \times c \times c$

....

(1)

(b) Simplify $2h^3 + 5h^3 - h^3$

....

(1)

(c) Expand $x(x + 5)$

....

(1)

(d) Factorise $9y - 12$

....

(1)

Rosanna sells m small bags of marbles and p large bags of marbles.

Each small bag contains 15 marbles.
Each large bag contains 40 marbles.

The total number of marbles that Rosanna sells is T

(e) Write down a formula for T in terms of m and p

....

(3)

(Total for Question 19 is 7 marks)

20   (a) Simplify $3c + 5d - c + 2d$

....

(2)

(b) Simplify $8e \times 5f$

....

(1)

(c) Solve $5r - 3 = 8$

$r = $ ....

(2)

(Total for Question 20 is 5 marks)

21 (a) Simplify $10y - y$

....
(1)

(b) Simplify $3p \times 4p$

....
(1)

(e) Simplify $8c + 5d - 2c - 3d$

....
(2)

(Total for Question 21 is 4 marks)

22 (a) Simplify $w^{12} \div w^3$

....

(1)

(b) Simplify $5m^4p^2 \times 2m^3p$

....

(2)

(Total for Question 22 is 3 marks)

23 (a) Simplify $5p \times 9k$

....
(1)

(b) Simplify $3e + 2f + 8e - 7f$

....
(2)

(Total for Question 23 is 3 marks)

24   (a) Simplify $c \times c \times c \times c \times c$

....
(1)

(Total for Question 24 is 1 marks)

25 (b) Simplify $(3a^2b^4)^3$

....

(Total for Question 25 is 2 marks)

26 (a) Simplify $6a \times 2c$

....
(1)

(b) Simplify $4d + 3e + d - 5e$

....
(2)

(c) Solve $4x - 7 = 23$

$x =$ ....
(2)

(Total for Question 26 is 5 marks)

27 (a) Simplify $p + p + p + p$

....

(1)

(b) Simplify $5e + 6f + 7e - 2f$

....

(2)

(Total for Question 27 is 3 marks)