

1. (a) Simplify $m^3 \times m^6$

.....

(1)

(b) Simplify $\frac{p^8}{p^2}$

.....

(1)

(c) Simplify $(2n^3)^4$

.....

(2)

(4 marks)

2. (a) Simplify $m^6 \times m^7$

.....

(1)

(b) Simplify x^0

.....

(1)

(c) Simplify $(16y^6)^{\frac{1}{2}}$

.....

(2)

(4 marks)

3. (a) Simplify $m^5 \div m^3$

.....

(1)

(b) Simplify $5x^4y^3 \times x^2y$

.....

(2)

(3 marks)

4. (a) Simplify $a^4 \times a^5$ (1)

(b) Simplify $\frac{45e^6 f^8}{5ef^2}$ (2)

(c) Write down the value of $9^{\frac{1}{2}}$ (1)

(4 marks)

5. (a) Simplify $m^2 \times m^4$ (1)

(b) Simplify $y^7 \div y^5$ (1)

(c) Simplify $(m^3)^5$ (2)

(4 marks)

6. Simplify fully

(a) $p^2 \times p^7$ (1)

(b) $\frac{3q^4 \times 2q^5}{q^3}$ (2)

(c) $(2xy^3)^5$ (2)

(4 marks)

7. (a) Simplify $15y^6 \div 3y^2$

.....
(2)

(b) Simplify $7wx^2 \times 3w^3x$

.....
(2)



(4 marks)

8. Work out the value of

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(a) $(2^2)^3$

.....
(1)

(b) $(\sqrt{3})^2$

.....
(1)

(c) $\sqrt{2^4 \times 9}$

.....
(2)

(d) 4^{-2}

.....
(1)

(5 marks)

9. (a) Write down the value of $49^{\frac{1}{2}}$

.....
(1)

(b) Simplify

(i) $\frac{x^6}{x^2}$

.....

(ii) $(y^4)^3$

.....

(2)

(3 marks)

10. Simplify $\frac{15a^3 b^7}{3a^2 b^3}$

.....

(2 marks)

11. $7^5 \times 7^6 = 7^3 \times 7^k$

Find the value of k .

$k =$

(2 marks)

12. (a) Simplify $p^3 \times p^2$

.....

(1)

(b) Simplify $\frac{q^3 \times q^4 \times q}{q^2}$

.....

(2)

(3 marks)

13. Find the value of

(i) $36^{\frac{1}{2}}$

.....

(ii) 3^{-2}

.....

(2 marks)

14. (a) Write as a power of 7

(i) $7^8 \div 7^3$

.....

(ii) $\frac{7^2 \times 7^3}{7}$

.....

(3)

(b) Write down the reciprocal of 2

.....

(1)

(4 marks)

15. (a) Simplify

$$12y^3 \div 3y^5$$

.....

(2)

(b) Simplify

$$2w^3x^2 \times 3w^4x$$

.....

(2)

(4 marks)

16. (a) Work out the value of

(i) 4^2

.....

(ii) $\sqrt{64}$

.....

(iii) 3×2^3

.....

(3 marks)

17. Simplify

(i) $x^4 \times x^5$

.....

(ii) $\frac{p^8}{p^3}$

.....

(iii) $3s^2t^3 \times 4s^4t^2$

.....

(iv) $(q^3)^4$

.....

(6 marks)

18. Simplify fully

(i) $(p^3)^3$

.....

(ii) $\frac{3q^4 \times 2q^5}{q^3}$

.....

(4 marks)

19. Work out

(i) 4^0

.....

(ii) 4^{-2}

.....

(iii) $16^{\frac{3}{2}}$

.....

(4 marks)

20. (a) Find the value of

(i) 64°

.....

(ii) $64^{\frac{1}{2}}$

.....

(iii) $64^{-\frac{2}{3}}$

.....

(4 marks)
