

Indices 1

1) Simplify the following.

(a) 8^0

Answer(a) [1]

(b) $(x^5)^2$

Answer(b) [1]

(c) $p^{-3} \div p^4$

Answer(c) [1]

2) (a) Write down the value of x when

(i) $5^x \div 5^2 = 5^4$,

Answer(a)(i) $x =$ [1]

(ii) $\frac{1}{49} = 7^x$.

Answer(a)(ii) $x =$ [1]

(b) Write down the value of $3p^0$.

Answer(b) [1]

3) Simplify $\left(1\frac{1}{2}\right)^{-3}$.

Give your answer as a fraction.

Answer [2]

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4)

Use your calculator to find the value of

(a) $3^0 \times 2.5^2$,

Answer(a) [1]

(b) 2.5^{-2} .

Answer(b) [1]

5)

Simplify

$$4x^4 \times 5x^5.$$

Answer [2]

6)

Find the value of

(a) 9^4 ,

Answer(a) [1]

(b) 6^0 .

Answer(b) [1]

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7)

Simplify the following.

(a) $x^5 \times x^2$

Answer(a) [1]

(b) $20y^4 \div 4y^{-2}$

Answer(b) [2]

8)

Find the value of

(a) $\sqrt[3]{2744}$,

Answer(a) [1]

(b) 6^4 .

Answer(b) [1]

9)

Simplify

(a) $p^3 \times p^4$,

Answer(a) [1]

(b) $12q^8 \div 3q^2$.

Answer(b) [2]

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10)

(a) $\frac{1}{27} = 3^x$.

Write down the value of x .

Answer(a) $x =$ [1]

(b) Simplify

(i) $p^7 \times p^{-2}$,

Answer(b)(i) [1]

(ii) $m^3 \div m^7$.

Answer(b)(ii) [1]

11)

Simplify

(a) $m^3 \times m^{-5}$,

Answer(a) [1]

(b) $15k^8 \div 3k^2$.

Answer(b) [2]