

AQA, OCR, Edexcel

GCSE

GCSE Maths

Indices and Powers Questions

Name:

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Total Marks: /41

Rules of Indices (Powers)

1. Simplify the following expressions:

a. $x^2 \times x^3$

b. $x^5 \times x^3$

c. $x^3 \div x^2$

d. $x^{10} \div x^8$

(4 Marks)

2. Simplify the following expression:

$$\frac{x^{10}}{x^7} x^3$$

(2 Marks)

3. Simplify the following expressions

a. $(x^2)^2$

b. $(3x^3)^3$

c. $(4x^2 \times 2x^2)^2$

(4 Marks)

4. Evaluate the following powers:

a. 100102^0

b. 1^{30}

(2 Marks)

5. Calculate the following:

a. $\left(\frac{1}{2}\right)^2$

b. $\left(\frac{3}{4}\right)^3$

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

d. $\left(2\frac{4}{5}\right)^2$

(8 Marks)

6. Calculate the following:

a. $16^{\frac{1}{2}}$

b. $9^{\frac{1}{2}}$

c. $27^{\frac{1}{3}}$

d. $64^{\frac{1}{3}}$

e. $16^{\frac{1}{4}}$

(10 Marks)

7. Simplify the following:

a. $25^{-\frac{1}{2}}$

b. 4^{-2}

c. $64^{-\frac{1}{3}}$

d. $64^{-\frac{2}{3}}$

(8 Marks)

8. Simplify the following:

$$(3x^2y^3z^4)^3$$

(3 Marks)