

Index laws with numbers

Grade 4 | Foundation and Higher | 13 questions, 33 marks

GCSE Maths topic practice



Scan for the solutions

Name: _____

Date: _____

Score: _____ / 33

1 Write down the value of 100^3

(1 mark)

Answer _____

2 a. Write down the value of 5^0

b. Write down the value of 2^{-3} as a fraction

(2 marks)

Answer _____

3 a. Write $7^4 \times 7^3$ as a single power of 7

b. Write $12^9 \div 12^4$ as a single power of 12

(2 marks)

Answer _____

4 Write $(4^3 \times 4^5) \div 4^2$ as a single power of 4

(2 marks)

Answer _____

5 a. Write $(5^3)^4$ as a single power of 5

b. Write down the value of 8^0

(2 marks)

Answer _____

6

- a. Write down the value of 10^{-3} as a decimal.
b. Write down the value of 100^2
c. Write $\frac{1}{9}$ as a power of 3.

(3 marks)

Answer _____

7

Work out the value of $(3^5 \times 3^{-2}) \div 3$

(2 marks)

Answer _____

8

Work out the value of $(2^5 \times 2^{-2}) \div 2^2$

(3 marks)

Answer _____

9

$$\frac{2^6 \times 2^k}{2^3} = 2^{11}$$

Find the value of k .

(3 marks)

Answer _____

10

- a. $3^k \div 3^2 = 3^6$. Find the value of k .
b. $(2^3)^m = 2^{12}$. Find the value of m .

(3 marks)

Answer _____

11

- a. Write $7^{-2} \times 7^{-3}$ as a single power of 7
b. Work out the value of $7^{-2} \times 7^{-3}$ as a fraction.

(3 marks)

Answer _____

12

- a. Write 8×2^4 as a power of 2
b. Write 25×5^3 as a power of 5

(3 marks)

Answer _____

13

- a. Write $(7^2)^5$ as a single power of 7

- b. Zara writes

$$3^4 \times 3^5 = 9^9$$

Explain what Zara has done wrong, and write down the correct answer as a single power.

(4 marks)

Answer _____

End of questions | Total 33 marks