



Name: _____

Date: _____

Score: _____ / 41

1 Work out the value of

a. 5^{-2}

b. 4^{-3}

(2 marks)

Answer _____

2 a. Work out the value of 9^0

b. Work out the value of 2^{-4}

(2 marks)

Answer _____

3 Write each number as a power with a negative index.

a. Write $\frac{1}{81}$ as a power of 3.

b. Write $\frac{1}{125}$ as a power of 5.

(2 marks)

Answer _____

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

(2 marks)

Answer _____

5 Work out the value of

a. $(\frac{2}{3})^{-2}$

b. $(\frac{1}{4})^{-3}$

(3 marks)

Answer _____

6

a. Work out the value of $8^{\frac{2}{3}}$

b. Work out the value of $25^{-\frac{1}{2}}$

c. Work out the value of 10^{-2}

(3 marks)

Answer _____

7

Work out the value of the letter in each equation.

a. $2^k = \frac{1}{32}$

b. $5^m = 0.04$

(3 marks)

Answer _____

8

Work out the value of

a. $49^{-\frac{1}{2}}$

b. $27^{-\frac{2}{3}}$

c. $32^{-\frac{3}{5}}$

(3 marks)

Answer _____

9 Simplify

a. $3x^{-2} \times 2x^5$

b. $12x^3 \div 4x^{-2}$

c. $(2x^{-2})^3$

(4 marks)

Answer _____

10 Work out the value of

a. $(\frac{4}{9})^{-\frac{1}{2}}$

b. $(\frac{1}{8})^{-\frac{2}{3}}$

(4 marks)

Answer _____

11 a. Simplify $n^{-5} \times n^8$

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

(3 marks)

Answer _____

12 Write $\frac{5}{2x^3}$ in the form ax^n , where a and n are constants.

Write down the value of a and the value of n .

(2 marks)

Answer _____

13 Expand and simplify

a. $x^{-2}(x^5 + 4x^2)$

b. $3x^{-1}(2x^3 - 5x)$

(4 marks)

Answer _____

14

a. Write down the value of 17^0

b. Write down the value of 4^{-2}

c. Simplify $(m^{-3})^4 \times m^{14}$

(4 marks)

Answer _____

End of questions | Total 41 marks