

NAME: _____

Score: _____

Grade 7 Mathematics Unit 1 TEST 1

15

Q1) Choose the correct answer

1. Simplify $a^2 \times a^3$

☐ a^5

☐ $6a^6$

☐ $12a^6$

☐ $6a^5$

2. Simplify $\frac{a^5}{a^2}$

☐ a^3

☐ $3a^3$

☐ $3a^7$

☐ $12a^7$

3. Simplify $(a^2)^3$

☐ $3a^6$

☐ $6a^6$

☐ $12a^6$

☐ $3a^9$

4. Simplify a^2 times a of b

☐ ab

☐ ab^2

☐ $2ab$

☐ $2a^2b^2$

Q2) Choose the correct answer

5. Simplify 2^{-3}

☐ $\frac{1}{8}$

☐ $\frac{1}{2}$

☐ $\frac{1}{4}$

☐ $\frac{1}{6}$

6. Simplify 10^{-4}

☐ $\frac{1}{100}$

☐ $\frac{1}{1000}$

☐ $\frac{1}{10000}$

☐ $\frac{1}{100000}$

7. Which of the following is equal to $\frac{1}{a^2}$

☐ $a \times a$

☐ $a \times a^2$

☐ $a^2 \times a^2$

☐ $a^2 \times a^4$

Write a number in each box to make each statement

$4 \times \square = 12$

$10 \times \square = 140$

$\square \times 10 = 100$

Q3) Solve the following problems

8. Evaluate the following expressions

$a) \quad (-8) \div (-3)$

$b) \quad (-3) \times 4$

9. Solve

$4 - (-12) + (-12) \div 3$

Show your working

10. The temperature in Dubai is 48°C . The colder temperature is 12°C . What is the difference in temperature between the two and the lower?

11. If $3x^2 = 12$, what are the possible values of x

$3x^2 = 12 \quad \text{OR} \quad -12$

Q4)

12. There is a relationship involving powers of 2

$2^x \times 2^y = 2^z$

x and y are positive whole numbers each greater than 1

What does z equal for x and y

$2^x =$ _____

$2^y =$ _____

13. There is another relationship involving powers of 2

$2^x \times 2^y = 2^z$

x and y are positive whole numbers each greater than 1

What does z equal for x and y

$2^x =$ _____

$2^y =$ _____