

NAME: _____

Score: _____

Grade 7 Mathematics Unit 1 TEST 1

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 6

☐ $6a^3$

☐ $6a^2$

☐ $12a$

☐ 12 times $6a^3$

Q2) Choose the correct answer

5. Simplify 2^{-4}

☐ $\frac{1}{8}$

☐ $\frac{1}{16}$

☐ $\frac{1}{32}$

☐ $\frac{1}{64}$

6. Simplify 16^{-4}

☐ $\frac{1}{256}$

☐ $\frac{1}{128}$

☐ $\frac{1}{64}$

☐ $\frac{1}{32}$

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

☐ a^{-2}

☐ $2a^2$

☐ $\frac{1}{a^2}$

☐ $\frac{1}{a^4}$

Write a number in each box to make each statement

$4 \times \square = 12$

$10 \times \square = 240$

$\square \times 1 = 45$

$\square \times 1 = 3$

Q3) Solve the following problems

8. Evaluate the following expressions

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

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

9. Solve

$4 \times (-12) + (-1) \times (-2) \times 3$

Show your working

10. The temperature in Chicago is 18°C . The higher 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

$2^4 \times 2^3 = 2^7$

x and y are positive whole numbers each greater than 1

What does x and possible pair of values for x and y

$x =$ _____

$y =$ _____

13. There is another relationship involving powers of 2

$2^5 \times 2^2 = 2^7$

x and y are positive whole numbers each greater than 1

What does x and possible pair of values for x and y

$x =$ _____

$y =$ _____