

## Unit 4 Test: Exponents

Name: \_\_\_\_\_ NO. \_\_\_\_\_

Part 1: Fill in the missing blanks.

1.  $a^m \times a^n$  is equal to \_\_\_\_\_.
2.  $a^{-n}$  is equal to \_\_\_\_\_.
3.  $(a^m)^n$  is equal to \_\_\_\_\_.
4. In an expression  $3^4$ , 3 is called \_\_\_\_\_.
5. Write  $5 \times 5 \times 5 \times 5$  in an exponential form. \_\_\_\_\_

### Part 2: Multiple – Choice

Check the box of the correct answer in each items.

6.  $(3x^3)^2$   
☐  $3x^6$       ☐  $9x^5$       ☐  $6x^6$       ☐  $9x^6$
7. Which expression is NOT equal to 1?  
☐  $(5)^0$       ☐  $(1)^{-2}$       ☐  $(-1)^3$       ☐  $(9^3) \div (9^3)$
8.  $y \cdot y^3 \cdot y^2$   
☐  $y^5$       ☐  $y^0$       ☐  $y^6$       ☐  $y^7$
9.  $(2x^5y^3)(3x^3y)$   
☐  $6x^8y^4$       ☐  $5x^8y^3$       ☐  $6x^{15}y^3$       ☐  $6x^8y^3$

10.  $\frac{m^6 n^{-2} p^4}{m^2 n^4 p}$

☐  $m^4 n^6 p^{31}$

☐  $\frac{m^4 p^3}{n^6}$

☐  $\frac{m^4 n^6}{p^3}$

☐ 0

11.  $\frac{25a^2 b^3}{5a}$

☐  $\frac{a}{b}$

☐  $\frac{5ab^3}{6}$

☐  $\frac{b^3}{5a}$

☐  $5ab^3$

12.  $4^2 \cdot (cb^3)^0$

☐ -16

☐ 16

☐  $16cb^3$

☐  $-16cb^3$

13.  $(6^2) \cdot (2^4) \cdot (6^{-2})$

☐ 12

☐  $\frac{1}{12}$

☐ 24

☐ 16

14.  $3x^4 \cdot 4x^{-2} \cdot x^3$

☐  $12x^5$

☐  $12x^2$

☐  $\frac{7x^7}{x^2}$

☐  $\frac{12}{x^5}$

15. Which is the correct value of  $2^2 + 3 \times 5 - 3$  ?

☐ 14

☐ 10

☐ 16

☐ 32

16. Evaluate :  $(-2)^4 \times (-2)^2 \div (-2)^0$

☐ -32

☐ 256

☐ 64

☐ -64

17. What is equivalent of  $10^7$ ?

☐ 10 000 000    ☐ 100 000 000    ☐ 100 000    ☐ 1 000 000

18. What is  $(-10^0)^3$ ?

☐ 0    ☐ 1    ☐ -1    ☐ 3

19. What is  $-(4^7)^0$ ?

☐ -1    ☐ 1    ☐ 0    ☐ 4

20. Which of the following is equivalent to  $\frac{1}{10} \times \frac{1}{10}$  ?

☐  $10^{-1}$     ☐  $10^2$     ☐  $10^{-2}$     ☐  $1^2$