

Exponents Practice2
01/05/2017

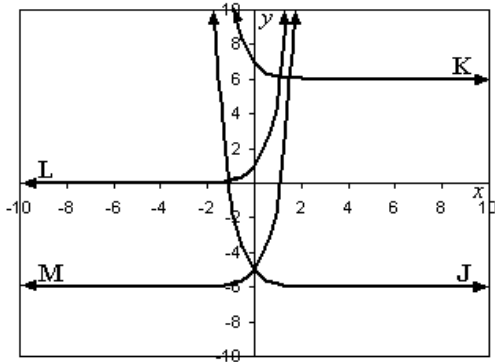
Student Name: _____

Class: _____

Date: _____

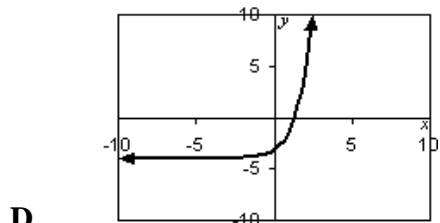
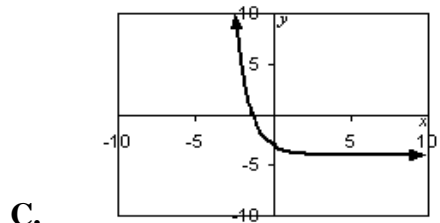
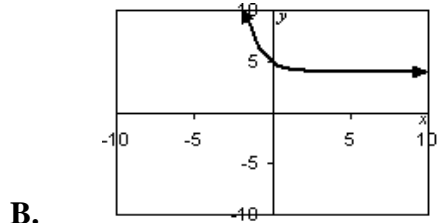
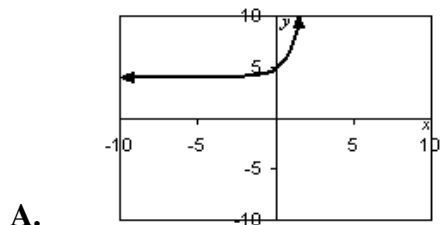
Instructions: Read each question carefully and select the correct answer.

1. Which graph represents the exponential function $y = 5^{-x} + 6$?

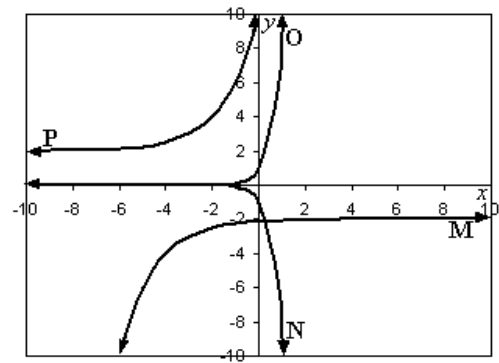


- A. J
 - B. K
 - C. L
 - D. M
2. Compare the graph of $f(x) = 7^x$ and the graph of $g(x) = 7^{(x+5)} + 5$.
- A. $g(x)$ shifts 5 units to the right and 5 units up from $f(x)$
 - B. $g(x)$ shifts 5 units to the left and 5 units up from $f(x)$
 - C. $g(x)$ shifts 5 units to the right and 5 units down from $f(x)$
 - D. $g(x)$ shifts 5 units to the left and 5 units down from $f(x)$

3. Which graph represents the exponential function $y = 3^x + 4$?



4. Which graph represents the exponential function $y = 2^{3x}$?



- A. M
- B. N
- C. O
- D. P

5. Simplify.

$$81^{\frac{1}{4}}$$

- A. 3
- B. 9
- C. 324
- D. $\frac{81}{4}$

6. Simplify.

$$243^{\frac{2}{5}}$$

- A. 6
- B. 27
- C. 3
- D. 9

7. Simplify.

$$27^{\frac{2}{3}}$$

- A. 18
- B. 9
- C. 6
- D. 3

8. Simplify.

$$1^{\frac{2}{5}}$$

- A. 1
- B. $\frac{5}{2}$
- C. 5
- D. $\frac{2}{5}$

9. Which of the following is true?

A. $10^{-4} = 10,000$

B. $10^{-4} = -0.0001$

C. $10^{-4} = 0.0001$

D. $10^{-4} = -10,000$

10. Simplify.

$$\frac{20(y^{-3})^5}{160(y^2)^{-3}}$$

A. $\frac{y^9}{8}$

B. $\frac{1}{8y^9}$

C. $8y^9$

D. $\frac{y^{15}}{8}$

11. Which of the following is true?

A. $-5.3 \times 10^5 = \frac{1}{530,000}$

B. $-5.3 \times 10^5 = -530,000$

C. $-5.3 \times 10^5 = -0.0000053$

D. $-5.3 \times 10^5 = 530,000$

12. Simplify.

$$\frac{-15x^6y^{-2}}{75x^{-3}y^7}$$

A. $-\frac{x^9}{5y^9}$

B. $-\frac{x^3}{5y^5}$

C. $-\frac{x^3y^5}{5}$

D. $\frac{60x^9}{y^9}$

13. Simplify.

$$(4^0) \cdot \left(\frac{1}{2^{-1}}\right) \cdot (2 \cdot 3)^0 + 5^{-1}$$

A. $\frac{24}{5}$	B. 10
C. 5	D. $\frac{11}{5}$

- A. A
- B. B
- C. C
- D. D

14. Simplify.

$$\frac{-9m^6}{3m^2}$$

- A. $-3m^3$
- B. $-6m^4$
- C. $-3m^4$
- D. $-3m^8$

15. Find the missing term.

$$(x^{5b}) \cdot (?) = x^{7b}$$

- | | |
|----|----------|
| A. | x^2 |
| B. | b^{2x} |
| C. | $2x$ |
| D. | x^{2b} |

- A. A
- B. B
- C. C
- D. D

16. Simplify

$$(6ab^2c)^{-4}$$

- | | | | |
|----|-------------------------|----|---------------------------|
| A. | $\frac{1}{24a^4b^8c^4}$ | C. | $\frac{1}{1296a^4b^8c^4}$ |
| B. | $24a^4b^8c^4$ | D. | $1296a^4b^8c^4$ |

- A. A
- B. B
- C. C
- D. D