

# Practice with Exponents Algebraic

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**Directions:** For the following problems, choose an answer from among the multiple choices.

1.  $(2a^3)^2 =$



**Choose:**

- $4a^6$
  - $2a^6$
  - $2a^5$
- 

2.  $(-2x)^3 =$



**Choose:**

- $-2x^3$
  - $-8x^3$
  - $8x^3$
- 

3.  $(5y^4)^2 =$

**Choose:**



- $25y^6$
  - $25y^8$
  - $5y^8$
- 

4.  $(3x^3)^3 =$



**Choose:**

- $27x^9$
  - $9x^9$
  - $9x^6$
- 

5.  $2x^4 \cdot 3x^3 =$



**Choose:**

- $6x^{12}$
  - $6x^7$
  - $5x^7$
-

6.  $4x^{-2} \cdot 2x^3 =$



Choose:

- $8x$
- $8x^{-5}$
- $8x^{-6}$

7.  $5a^{-2} \cdot 6a^{-3} =$



Choose:

- $30a^6$
- $30a^{-6}$
- $30a^{-5}$

8.  $2(3x^2)^3 =$



Choose:

- $54x^6$
- $6x^6$
- $18x^6$

9.  $4(3m^3)^2 =$



Choose:

- $12m^6$
  - $24m^6$
  - $36m^6$
- 

10.  $4x^3 \cdot 5x^6 =$



Choose:

- $20x^9$
  - $20x^{18}$
  - $9x^9$
- 

11. If  $x = -3$  and  $y = 7$ ,  
find the value of  $x^2 y^3$ .



Choose:

- $-3087$
  - $343$
  - $3087$
-

12. What is the value of  $(a + b)^2$  when  $a = 2/3$  and  $b = -2$ ?



Choose:

- 16/9
- 25/9
- 64/9

13. Find the value of  $(2x - 6)^0$  when  $x$  does not equal 3.



Choose:

- 0
- 1
- it varies

14. Which expression represents  $\frac{(2x^3)(8x^5)}{4x^6}$  in simplest form?



Choose:

- $x^2$
- $4x^2$
- $4x^9$

**15.** The expression

$$\frac{9x^4 - 27x^6}{3x^3}$$

is equivalent to:



**Choose:**

- $3x(1 - 3x)$
- $3x(1 - 3x^2)$
- $3x(1 - 9x^5)$
- $9x^3(1 - x)$