

NAME

QUARTER

GRADE &amp; SECTION

DATE

Activity: **Laws of Exponents**

$$\triangleright a^m \cdot a^n = a^{m+n}$$

$$\triangleright \frac{a^m}{a^n} = a^{m-n}$$

$$\triangleright (a^m)^n = a^{m \cdot n}$$

$$\triangleright (a^m b^n)^p = a^{mp} b^{np}$$

$$\triangleright \left(\frac{a^m}{b^n}\right)^p = \frac{a^{mp}}{b^{np}}$$

Simplify the following expressions by applying the laws of exponents.

1.  $a^3 \cdot a^5 = a^{\boxed{\phantom{00}}}$

2.  $a^3 b \cdot ab^6 = a^{\boxed{\phantom{00}}} b^{\boxed{\phantom{00}}}$

3.  $(2b^5)^3 = \boxed{\phantom{00}} b^{\boxed{\phantom{00}}}$

4.  $(a^4 b^2)^3 = a^{\boxed{\phantom{00}}} b^{\boxed{\phantom{00}}}$

5.  $(a^2)^3 (a^2)^2 = a^{\boxed{\phantom{00}}}$

6.  $(3b^2)(2b) = \boxed{\phantom{00}} b^{\boxed{\phantom{00}}}$

7.  $\frac{a^7}{a^3} = a^{\boxed{\phantom{00}}}$

8.  $\left(\frac{a^3 b^5}{ab}\right)^2 = a^{\boxed{\phantom{00}}} b^{\boxed{\phantom{00}}}$

9.  $\frac{(4a^4)^2}{(2a)^3} = \boxed{\phantom{00}} a^{\boxed{\phantom{00}}}$

10.  $(5a^2 bc^4)^0 = \boxed{\phantom{00}}$

How many attempts? \_\_\_\_.  
How well did you do?



Need help!



Just OK!



Splendid

I HAVE TO KEEP IN MIND THAT...