MathVine - Pre-Algebra

Name_____

Exponentiating Exponents	Date	Period
--------------------------	------	--------

Convert to exponent form.

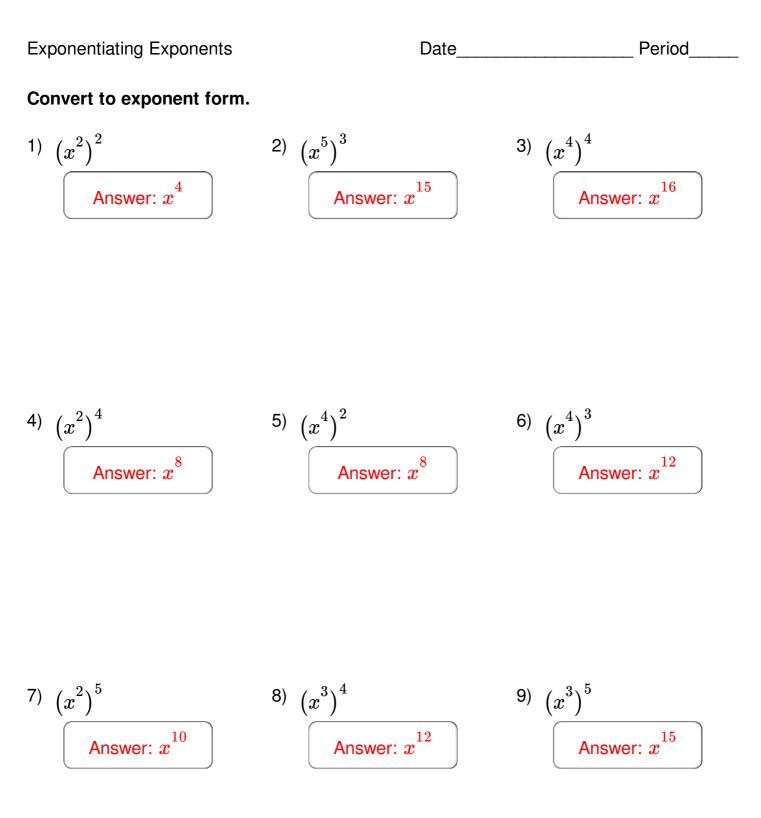
1)
$$(x^2)^2$$
 2) $(x^5)^3$ 3) $(x^4)^4$

4)
$$(x^2)^4$$
 5) $(x^4)^2$ 6) $(x^4)^3$

7)
$$(x^2)^5$$
 8) $(x^3)^4$ 9) $(x^3)^5$

MathVine - Pre-Algebra

Name



Solution Steps

1) $(x^2)^2$ When you have an exponent expression raised to a power, you have to multiply the two exponents $(x^2)^2 = x^{(2*2)}$ x^4

4) $(x^2)^4$

When you have an exponent expression raised to a power, you have to multiply the two exponents ${(x^2)}^4 = x^{(2*4)} x^8$

7)
$$(x^2)^5$$

When you have an exponent expression raised to a power, you have to multiply the two exponents $\left(x^2\right)^5 = x^{(2*5)}$

²⁾ $(x^5)^3$ When you have an exponent expression raised to a power, you have to multiply the two exponents

$${{(x^5)}^3 = x^{(5*3)} \over x^{15}}$$

5) $(x^4)^2$ When you have an exponent expression raised to a power, you have to multiply the two exponents $(x^4)^2 = x^{(4*2)}$ x^8

⁸⁾ $(x^3)^4$ When you have an exponent expression raised to a power, you have to multiply the two exponents $(x^3)^4 = x^{(3*4)}$

$$egin{array}{rcl} (x^{\circ}) &= x^{\circ\circ} \ x^{12} \ \end{array}$$

3) $(x^4)^4$

When you have an exponent expression raised to a power, you have to multiply the two exponents $(x^4)^4 = x^{(4*4)}$

6)
$$(x^4)^3$$

When you have an exponent expression raised to a power, you have to multiply the two exponents $(4x^3)$ (4*3)

$${{(x^4)}^{5}}=x^{(4*)}
onumber \ x^{12}$$

⁹⁾ $(x^3)^5$ When you have an exponent expression raised to a power, you have to multiply the two exponents $(x_{15}^3)^5 = x^{(3*5)}$