

Name _____

Evaluate the exponential form.

1) -14^0

2) $(-12)^0$

Simplify. Assume that variables represent nonzero numbers.

3) $(x^5y^3)(x^8y^7z^0)$

4) $(2y)^6(2y)^5$

5) $(t - 3)^{11}(t - 3)^7$

6) $(n^6)^3(m^5n)^4$

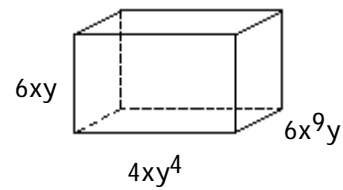
7) $\left(\frac{x+y}{4}\right)^3$

8) $\left(\frac{3x^2}{z^2}\right)^3$

9) $\left(\frac{xy^7}{z^7}\right)^0$

Find the area or volume of the figure, as specified.

10) Find the volume.



11) $\left(c + \frac{9}{7}\right)^2$

12) $(4k + 1)^3$

Simplify the expression.

13) $\left(\frac{1}{4}\right)^{-3}$

Simplify. Do not use negative exponents in your answer.

$$14) (y^{-5}z^{-5})(y^{-2}z^{-7})$$

$$15) 2^{-5} \cdot 2^6$$

Simplify the expression. Write the answer using positive exponents.

$$16) \frac{6^4 x^8}{6^8 x^6}$$

$$17) \frac{(x+c)^{-20}}{(x+c)^{-5}}$$

$$18) (k^5)^{-6}(km)^4$$

$$19) \left(\frac{c}{2}\right)^{-3}$$

$$20) \left(\frac{4a}{b}\right)^{-2}$$

Answer Key

Testname: 12_1_EXPONENTS

1) -1

2) 1

3) $x^{13}y^{10}$

4) $(2y)^{11}$

5) $(t - 3)^{18}$

6) $m^{20}n^{22}$

7) $\frac{(x + y)^3}{64}$

8) $\frac{27x^6}{z^6}$

9) 1

10) $144x^{11}y^6$

11) $c^2 + \frac{18}{7}c + \frac{81}{49}$

12) $64k^3 + 48k^2 + 12k + 1$

13) 64

14) $\frac{1}{y^7z^{12}}$

15) 2

16) $\frac{x^2}{6^4}$

17) $\frac{1}{(x+c)^{15}}$ *do not distribute exponent!!*

18) $\frac{m^4}{k^{26}}$

19) $\frac{8}{c^3}$

20) $\frac{b^2}{16a^2}$