

Corrective Assignment

Date _____

1) Express the following using exponents.

a. $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$

b. $\frac{1}{x} \cdot \frac{1}{x}$

c. $5 \cdot 5 \cdot m \cdot m \cdot n \cdot n \cdot n$

d. $\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2}$

2) Express the following without using exponents.

a. $2^3 x^2$

b. 4^{-3}

c. $\left(\frac{3}{4}\right)^3$

d. x^{-5}

Simplify. Your answer should contain only positive exponents.

3) $2 \cdot 2^{-4}$

4) $4^{-4} \cdot 4^{-2}$

5) $(2^{-1})^4$

6) $(4^2)^3$

7) $\frac{4^{-1}}{4^0}$

8) $\frac{4^{-3}}{4^0}$

9) $4x^3 \cdot 3x^{-3}$

10) $4a^{-1} \cdot 4a^0$

11) $(4k^4)^3$

12) $(2p^2)^{-1}$

13) $\frac{2x^{-1}}{3x^3}$

14) $\frac{-4n^{-4}}{-4n^2}$

15) $-4xy^2 \cdot 2x^{-2}y^{-3}$

16) $-3b^4 \cdot 3a^{-1}b^{-4}$

17) $(4x^4y^4)^{-3}$

18) $(-4a^3b^3)^{-4}$

19) $\frac{mn^{-3}}{4m^{-1}n^2}$

20) $-\frac{3mn^3}{4nm^3}$

21) $(n^{-2})^4 \cdot 2n^3$

22) $\frac{n^{-4}}{3n^3 \cdot -2n}$

23) $\frac{(a^4)^3}{-a^4}$

24) $-\frac{r(-2r)^3}{(-r)^3}$

Simplify. Write each answer in scientific notation.

25) $(4.75 \times 10^{-9})(2 \times 10^{-9})$

26) $(7.9 \times 10^{-6})(7 \times 10^{-7})$

27) $\frac{2.1 \times 10^{-5}}{7 \times 10^{-1}}$

28) $\frac{3.6 \times 10^0}{3.75 \times 10^{-7}}$

29) $(5 \times 10^{-7})^{-1}$

30) $(2 \times 10^{-2})^9$

Express in scientific notation

31) 5,555,000,000

32) 0.000172

Express in standard notation (decimal notation).

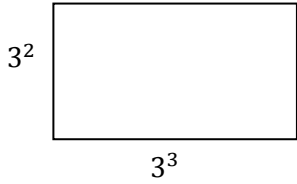
33) 5×10^{-6}

34) 8.35×10^5

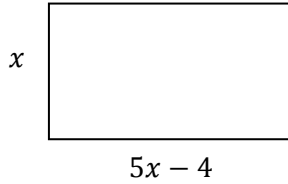
REVIEW APPLICATIONS

Find the area of the following rectangles:

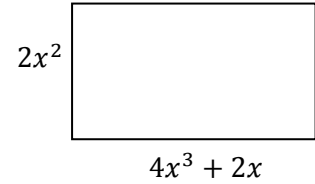
1.



2.

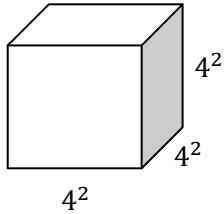


3.

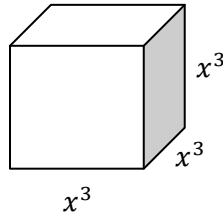


Find the volume of the following cubes:

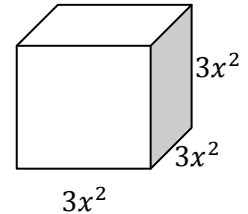
4.



5.



6.



EXPAND

Expand the following to simplify. SHOW WORK!

7. $(3xy^3)^2(2x^4y^2) =$

RULE

Use the rules to simplify.

8. $(-5x^7y^2z)^3(4xy^0z^9)^2 =$

9. List the elements in order from least to concentration to greatest concentration.

Elements in Seawater	Concentration (parts per million)
Sulfur	90400
Chloride	1.95×10^4
Magnesium	1.29×10^3
Sodium	10,770

ANSWERS TO UNIT 9 CORRECTIVE ASSIGNMENT

- 1) a. 2^8 b. $\left(\frac{1}{x}\right)^2$ c. $5^2 \cdot m^2 n^3$ d. $\left(\frac{1}{2}\right)^3$
- 2) a. $2 \cdot 2 \cdot 2 \cdot x \cdot x$ b. $\frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} = \frac{1}{64}$ c. $\frac{3}{4} \cdot \frac{3}{4} \cdot \frac{3}{4}$ d. $\frac{1}{x} \cdot \frac{1}{x} \cdot \frac{1}{x} \cdot \frac{1}{x} \cdot \frac{1}{x}$
- 3) $\frac{1}{2^3}$ 4) $\frac{1}{4^6}$ 5) $\frac{1}{2^4}$ 6) 4^6
- 7) $\frac{1}{4}$ 8) $\frac{1}{4^3}$ 9) 12 10) $\frac{16}{a}$
- 11) $64k^{12}$ 12) $\frac{1}{2p^2}$ 13) $\frac{2}{3x^4}$ 14) $\frac{1}{n^6}$
- 15) $-\frac{8}{xy}$ 16) $-\frac{9}{a}$ 17) $\frac{1}{64x^{12}y^{12}}$ 18) $\frac{1}{256a^{12}b^{12}}$
- 19) $\frac{m^2}{4n^5}$ 20) $-\frac{3n^2}{4m^2}$ 21) $\frac{2}{n^5}$ 22) $-\frac{1}{6n^8}$
- 23) $-a^8$ 24) $-8r$ 25) 9.5×10^{-18} 26) 5.53×10^{-12}
- 27) 3×10^{-5} 28) 9.6×10^6 29) 2×10^6 30) 5.12×10^{-16}
- 31) 5.555×10^9 32) 1.72×10^{-4} 33) 0.000005 34) 835,000

APPLICATION

1. 3^5 2. $5x^2 - 4x$ 3. $8x^5 + 4x^3$ 4. 4^6 5. x^9
6. $27x^6$ 7. $18x^6y^8$ 8. $-2000x^{27}y^6z^{21}$ 9. magnesium, sodium, chloride, sulfur