

**Worksheet ---- Chapter 1 Review**

1. Evaluate the following if  $a = 2$  and  $b = -3$ .

a)  $3ab - 6b$

b)  $4a^4 + 2b^3 + \frac{27a^3}{4b^3}$

2. Find the area of a triangle if its height is 9.5 ft. and its corresponding base is 15.7 ft.

3. If the area of a circle is  $225\pi$  inches, what is the length of the radius?

4. Simplify the following:

a)  $\frac{2}{7} + (-\frac{4}{5})$

b)  $-3.75 - (-6.25)$

c)  $12 - \sqrt{7-3} + 4 \div 3 \cdot 2^3$

5. Name the property illustrated below.

a)  $2x(x-3y) = 2x^2 - 6xy$

b)  $(25+6) + 17 = 25 + (6+17)$

6. Factor the following:

a)  $12x - 21$

b)  $15x^2y + 30x^3y + 15x^2y^2$

7. Simplify:  $9a - [7 - 5(7a - 3)] + 13 - 11a$

8. Solve the following:

a)  $\frac{1}{5}x + \frac{3}{10}x = \frac{4}{5}$

b)  $\frac{1}{6}(12t + 48) - 20 = -\frac{1}{8}(24t - 144)$

9. Solve the following for  $b$ :  $A = \frac{3r + 2b}{c}$

10. Simplify the following:

a)  $\frac{-40a^{20}}{(2a^5)^2}$

b)  $(6x^{-4}y^3)^2(-4x^{-8}y^{-2})$

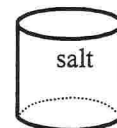
c)  $\left(\frac{-4x^4y^{-2}}{5x^{-1}y^4}\right)^{-4}$

d)  $\frac{4x^{2a+3}y^{2b-1}}{2x^{a+1}y^{b+1}}$

e)  $\left(\frac{2.5 \cdot 3^7}{41 \cdot 4^5}\right)^0$

f)  $\frac{-28x^{b+3}y^{4+c}}{7x^{b-5}y^{c-4}}$

11. The density of salt is  $2.16g/cm^3$ . An empty cardboard salt canister weighs 28 g, is 13.6 cm tall, and has a 4 cm radius. How much will a filled canister weigh?



12. Find three consecutive odd integers such that 2 times the first plus 3 times the second is 877.