

- Show all work
- Include sentence answers for word problems

## LEVEL 1-2

A]

1. Name the individual components of this expression. Use the word bank on the right!

$$3x + c^2 - 8$$

- Constant
- Term
- Co-efficient
- variable

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Write an algebraic expression for the following.

- a) A number increased by four
- b) Five more than twice a number
- c) 8 divided by  $x$

3. Evaluate the expressions for the values of each variable.

a)  $xy - 5$        $x = 6$  ,  $y = 2$

b)  $\frac{3a}{b}$        $a = 4$  ,  $b = 3$

4. Solve the following one-step equations.

a)  $x + 2 = 7$

b)  $x - 4 = -5$

b)  $7x = 21$

d)  $\frac{x}{5} = 10$

5. Expand using the distributive property.

a)  $8(x + 2)$

b)  $6(x - 2)$

c)  $-4(x + 4)$

d)  $-2(4 - s)$

B] LEVEL 3-4 Solve the following two-step equations.

a)  $4 = 2x + 20$

b)  $-3m + 5 = 14$

c)  $\frac{x}{4} - 4 = 2$

d)  $-2x + 12 = 17$

2. Solve using the distributive property.

a)  $5(a + 2) = 20$

b)  $4(p - 5) = -4$

c)  $10(y + 3) = 10$

verify your answer

3. Expand using the distributive property, then simplify by combining like terms.

a)  $3(2x + x - 5y)$

C] LEVEL 5-6

- Write equations and solve for the following scenarios. "STAR" it up!
1. Mrs. M chose an integer. She subtracted 5 and the result was 22. Which integer did she choose?
  
  
  
  
  
  
  
  
  
  
  2. Six friends go golfing. They each buy a ticket for a round of golf and a 5.00\$ bucket of balls. They spent 90.00\$ in total. How much was each ticket?

3. Seamus decides to go shopping at Safeway. He spends 10.00 on granola bars and buys 10 apples. His total cost was 35.00\$. What was the cost of each apple?

DJ LEVEL 7-8

- Solve the following equations.

1.  $-4(x + 2) = 2x - 26$

2.  $-3(x - 4) = -6(-x - 3)$

3. The equation  $e = -125(t - 122)$  models the amount of food energy hikers require per day, where  $e$  is the amount of food energy, in kilojoules (kJ), and  $t$  is the outside temperature, in degrees Celsius.

- If the outside temperature is  $-20^{\circ}\text{C}$ , how much food energy do hikers require per day.