

Practice Assignment

0 25 50 75 100

1. Write each phrase as an algebraic expression:

- a. Fourteen decreased by a number p .
- b. Five more than twice a number.
- c. 14 less than m .
- d. 18 more than y .
- e. The quotient of a number and 9
- f. The product of 5 and y added to 3
- g. 4 times a number cubed decreased by 7
- h. 3 more than four times a number

2. For each word problem, show the work to how you arrived at your answer for parts A and B. Define the quantity that is changing each time in part C. Using your work, create an algebraic expression for part D.

- a. *You buy 100 yo-yos to give away as prizes at a carnival.*
 - a. If 12 people win a prize, how many yo-yos will you have left?
 - b. How many yo-yos will you have if 34 people win a price?
 - c. What quantity is changing each time? What variable will you use to represent this quantity?
 - d. Write an expression to represent the scenario.
- b. *Bulk trail mix costs \$1.95 per pound.*
 - a. If you purchase 4 pounds of trail mix, how much will that cost?
 - b. If you purchase 7 pounds of trail mix, how much will that cost?
 - c. What quantity is changing each time? What variable will you use to represent this quantity?
 - d. Write an expression to represent the scenario.

c. *The charge for ice skating is \$3 for the skate rental and \$2 per hour to skate.*

- How much will you pay for 4 hours of skating?
- How much will you pay for $5\frac{1}{2}$ hours of skating?
- What quantity is changing each time? What variable will you use to represent this quantity?
- Write an expression to represent the scenario.

d. *You have \$15 to spend at the snack bar. All of the snacks at the snack bar cost \$1.50 each.*

- How much money will you have left if you buy 3 snacks?
- How much money will you have left if you buy 6 snacks?
- What quantity is changing each time? What variable will you use to represent this quantity?
- Write an expression to represent the scenario.

e. *Atlanta City Cab charges \$3.30 as an initial fee the minute the customer enters the cab. The company then charges \$2.40 per mile.*

- How much will it cost to ride if the cab travels 10 miles?
- How much will it cost to ride if the cab travels 13.5 miles?
- What quantity is changing each time? What variable will you use to represent this quantity?
- Write an expression to represent the scenario.

f. *Caitlin has \$200 in her savings account. She withdraws \$15 each week.*

- How much will she have remaining after 5 weeks?
- How much will she have remaining after 9 week?
- What quantity is changing each time? What variable will you use to represent this quantity?
- Write an expression to represent the scenario.

3. Simplify:

a. $7(2 - 3x) - 5(6 + x) + 4x$

b. $-4(-2x + 5) + 2(\frac{1}{2}x + 2)$

c. $-6(-4x + 8) + 10 + 3(-5x + 7)$

d. $8 - 4(-x - 11) - 5(x + 9) + 13x$

4. Evaluate:

a. $\frac{-7d+14}{2}$ when $d = -4$

b. $32.68 - 4.15q$ when $q = 10$