

Lesson 8 Practice Problems

1. a. Draw a diagram of x + 3 and a diagram of 2x when x is 1.

b. Draw a diagram of x + 3 and of 2x when x is 2.

c. Draw a diagram of x + 3 and of 2x when x is 3.

d. Draw a diagram of x + 3 and of 2x when x is 4.

e. When are x + 3 and 2x equal? When are they not equal? Use your diagrams to explain.

2. a. Do 4x and 15 + x have the same value when x is 5?

b. Are 4x and 15 + x equivalent expressions? Explain your reasoning.

3. a. Check that 2b + b and 3b have the same value when b is 1, 2, and 3.

- b. Do 2b + b and 3b have the same value for all values of b? Explain your reasoning.
- c. Are 2b + b and 3b equivalent expressions?
- 4. 80% of *x* is equal to 100.
 - a. Write an equation that shows the relationship of 80%, *x*, and 100.
 - b. Use your equation to find *x*.

(From Unit 6, Lesson 7.)



- 5. For each story problem, write an equation to represent the problem and then solve the equation. Be sure to explain the meaning of any variables you use.
 - a. Jada's dog was $5\frac{1}{2}$ inches tall when it was a puppy. Now her dog is $14\frac{1}{2}$ inches taller than that. How tall is Jada's dog now?
 - b. Lin picked $9\frac{3}{4}$ pounds of apples, which was 3 times the weight of the apples Andre picked. How many pounds of apples did Andre pick?

(From Unit 6, Lesson 5.)

6. Find these products.

a. (2.3) • (1.4)
b. (1.72) • (2.6)
c. (18.2) • (0.2)
d. 15 • (1.2)

(From Unit 5, Lesson 8.)

7. Calculate $141.75 \div 2.5$ using a method of your choice. Show or explain your reasoning.

(From Unit 5, Lesson 13.)