

Summary 3.12

When representing story problems, sometimes more than 1 equation can be used to solve, but there is only 1 correct value for the unknown quantity. Representing story problems in more than 1 way allows you to consider all the possible ways to solve story problems.

A basketball team scored points by making baskets worth different numbers of points during a game.

- The team made 4 baskets worth 3 points each.
- The team made 20 baskets worth 2 points each.
- The team made 15 baskets worth 1 point each.

Write an equation that represents p , the total number of points the team scored during the game.

$$p = [(4 \times 3) + (20 \times 2)] + 15 \quad p = 4(3) + 20(2) + 15$$

$$p = [12 + 40] + 15$$

$$p = 12 + 40 + 15$$

$$p = 52 + 15$$

$$p = 52 + 15$$

$$p = 67 \quad \longleftrightarrow \quad p = 67$$

Practice 3.12

1



A class was tracking the growth of 3 plants in inches.

- Plant A grew 24 inches.
- Plant B grew 2 times as many inches as Plant C.
- Plant C grew 7 inches less than Plant A.

Determine the amount that Plant B grew in inches.



Record your answer in the space provided.

34 inches

2 A bike rental started the day with 65 bikes.

- 7 bikes were rented each hour for the first 3 hours of the day.
- 5 bikes were rented each hour for the last 5 hours of the day.
- At the end of the day, 32 bikes were returned.

The following equation is used by the bike rental to represent r , the number of bikes they have at the end of the day.

$$r = 65 - (7 \times 3) + (5 \times 5) + 32$$

What is the value of r , the number of bikes they have at the end of the day?

- | | |
|--------|---------|
| (A) 85 | (B) 110 |
| (C) 96 | (D) 101 |

3 At a restaurant, a family spent \$237. They spent \$101 on pizzas and \$87 on salads. They spent the rest of the money on dessert. The family used the following equation to represent d , the amount of money they spent on dessert.

$$d = 237 - (101 + 87)$$

Which is the value of d , the amount of money the family spent on dessert?

- | | |
|---------|--------|
| (A) 49 | (B) 50 |
| (C) 223 | (D) 56 |

Practice 3.12

Name _____ Date _____

4 Priya bought bottles of paint at the craft store.

- 8 bottles of blue paint were \$5 each.
- 11 bottles of red paint were \$4 each.
- 4 bottles of green paint were \$6 each.

Priya used the following equation to represent n , the total cost of the bottles of paint.

$$n = 8(5) + 11(4) + 4(6)$$

Which is the value of n , the total amount of money Priya spent on the bottles of paint?

(A) 108

(B) 100

(C) 97

(D) 102

Spiral Review

For Problems 5–12, determine whether the comparison statement is true or false.

5 $0.9 = \frac{9}{100}$ false

6 $\frac{7}{10} < 0.70$ false

7 $0.5 > \frac{5}{100}$ true

8 $0.8 < \frac{8}{100}$ false

9 $\frac{25}{100} = 0.25$ true

10 $1.5 = \frac{15}{10}$ true

11 $9.9 = \frac{99}{100}$ false

12 $12.7 > \frac{127}{100}$ true