

NAME \_\_\_\_\_

DATE \_\_\_\_\_

PERIOD \_\_\_\_\_

## Unit 6, Lesson 12: Solving Problems about Percent Increase or Decrease

1. A backpack normally costs \$25 but it is on sale for \$21. What percentage is the discount?

(from Unit 4, Lesson 12)

2. Find each product.

a.  $\frac{2}{5} \cdot (-10)$

b.  $-8 \cdot \left(\frac{-3}{2}\right)$

c.  $\frac{10}{6} \cdot 0.6$

d.  $\left(\frac{-100}{37}\right) \cdot (-0.37)$

(from Unit 5, Lesson 9)

3. Select **all** expressions that show  $x$  increased by 35%.

A.  $1.35x$

B.  $\frac{35}{100}x$

C.  $x + \frac{35}{100}x$

D.  $(1 + 0.35)x$

E.  $\frac{100+35}{100}x$

F.  $(100 + 35)x$

4. Complete each sentence with the word *discount*, *deposit*, or *withdrawal*.

a. Clare took \$20 out of her bank account. She made a \_\_\_\_\_.

b. Kiran used a coupon when he bought a pair of shoes. He got a \_\_\_\_\_.

c. Priya put \$20 into her bank account. She made a \_\_\_\_\_.

NAME

DATE

PERIOD

d. Lin paid less than usual for a pack of gum because it was on sale. She got a \_\_\_\_\_.

(from Unit 4, Lesson 11)

5. Here are two stories:

- The initial freshman class at a college is 10% smaller than last year's class. But then during the first week of classes, 20 more students enroll. There are then 830 students in the freshman class.
- A store reduces the price of a computer by \$20. Then during a 10% off sale, a customer pays \$830.

Here are two equations:

- $0.9x + 20 = 830$
- $0.9(x - 20) = 830$

a. Decide which equation represents each story.

b. Explain why one equation has parentheses and the other doesn't.

c. Solve each equation, and explain what the solution means in the situation.