

Lesson 12 Practice Problems

1. 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. $(100 + 35)x$

2. 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.

3. Select **all** the expressions that are the result of decreasing x by 80%.

A. $\frac{20}{100}x$

B. $x - \frac{80}{100}x$

C. $\frac{100-20}{100}x$

D. $0.80x$

E. $(1 - 0.8)x$

4. Which scale is equivalent to 1 cm to 1 km?

A. 1 to 1000

B. 10,000 to 1

C. 1 to 100,000

D. 100,000 to 1

E. 1 to 1,000,000

(From Unit 2, Lesson 7.)

5. Triangle DEF is a right triangle, and the measure of angle D is 28° . What are the measures of the other two angles?

(From Unit 1, Lesson 13.)