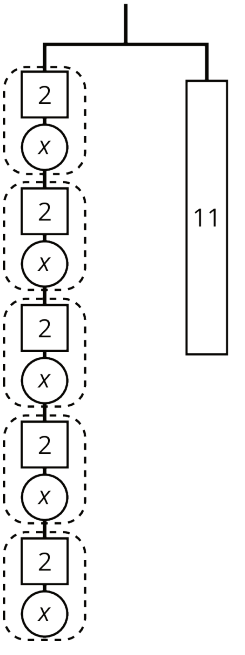
Lesson 8 Practice Problems

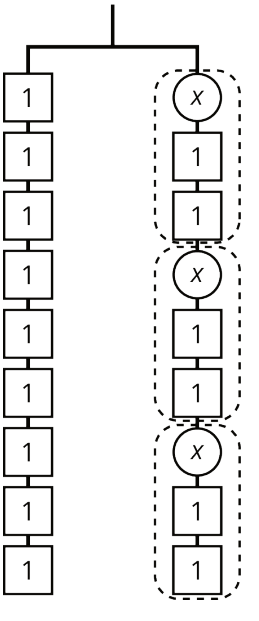
1. Here is a hanger:



   a. Write an equation to represent the hanger.

   b. Solve the equation by reasoning about the equation or the hanger. Explain your reasoning.

2. Explain how each part of the equation $9 = 3(x + 2)$ is represented in the hanger.



   - x
   - 9
   - 3
   - $x + 2$
   - $3(x + 2)$
   - the equal sign

3. Select the word from the following list that best describes each situation.

A. You deposit money in a savings account, and every year the amount of money in the account increases by 2.5%.

B. For every car sold, a car salesman is paid 6% of the car's price.

C. Someone who eats at a restaurant pays an extra 20% of the food price. This extra money is kept by the person who served the food.

D. An antique furniture store pays $200 for a chair, adds 50% of that amount, and sells the chair for $300.

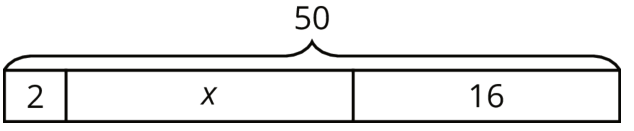
E. The normal price of a mattress is $600, but it is on sale for 10% off.

F. For any item you purchase in Texas, you pay an additional 6.25% of the item's price to the state government.

1. Tax
2. Commission
3. Discount
4. Markup
5. Tip or gratuity
6. Interest

(From Unit 4, Lesson 11.)

4. Clare drew this diagram to match the equation $2x + 16 = 50$, but she got the wrong solution as a result of using this diagram.



a. What value for x can be found using the diagram?

b. Show how to fix Clare's diagram to correctly match the equation.

c. Use the new diagram to find a correct value for x.

d. Explain the mistake Clare made when she drew her diagram.

(From Unit 6, Lesson 3.)