NAME   DATE   PERIOD
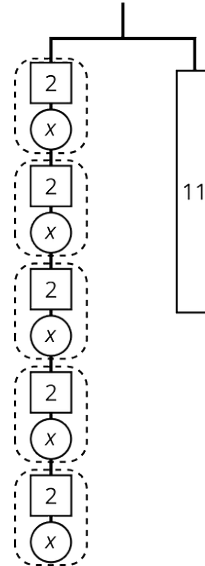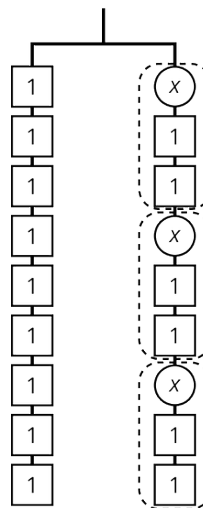
Unit 6, Lesson 8
Practice Problems

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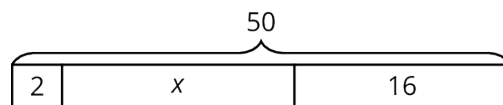   - $3(x + 2)$
   - the equal sign

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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%.

1. Tax

2. Commission

3. Discount

4. Markup

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

5. Tip or gratuity

6. Interest

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.

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.