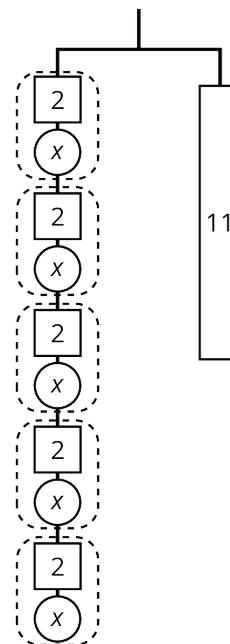


Unit 6 Lesson 8 Cumulative Practice Problems

1. Here is a hanger:

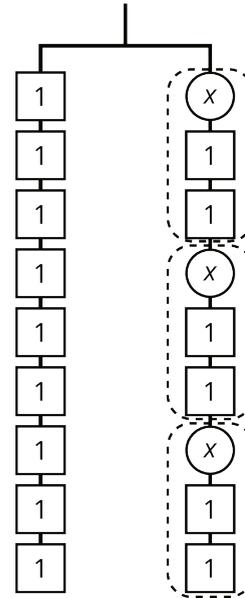
a. Write an equation to represent the hanger.

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
- $x + 2$
- $3(x + 2)$



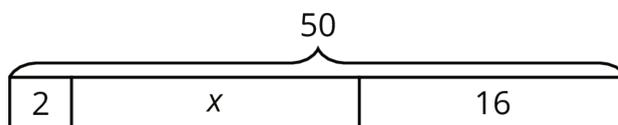
- the equal sign

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

- | | |
|--|---|
| <p>A. You deposit money in a savings account, and every year the amount of money in the account increases by 2.5%.</p> <p>B. For every car sold, a car salesman is paid 6% of the car's price.</p> <p>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.</p> <p>D. An antique furniture store pays \$200 for a chair, adds 50% of that amount, and sells the chair for \$300.</p> <p>E. The normal price of a mattress is \$600, but it is on sale for 10% off.</p> <p>F. For any item you purchase in Texas, you pay an additional 6.25% of the item's price to the state government.</p> | <p>1. Tax</p> <p>2. Commission</p> <p>3. Discount</p> <p>4. Markup</p> <p>5. Tip or gratuity</p> <p>6. Interest</p> |
|--|---|

(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.



- What value for x can be found using the diagram?
- Show how to fix Clare's diagram to correctly match the equation.
- Use the new diagram to find a correct value for x .
- Explain the mistake Clare made when she drew her diagram.

(From Unit 6, Lesson 3.)