

Name _____

1-2B Lesson Master**Questions on SPUR Objectives**

See pages 60–63 for objectives.

SKILLS Objective B

In 1–3, evaluate each expression.

1. $4\left(\frac{7}{2}\right) + 1$

2. $8\left(\frac{5}{2}\right) + 1$

3. $2\left(\frac{3}{2}\right) + 1$

4. Write another instance of the pattern shown by Questions 1–3.

In 5 and 6, give two instances of each pattern.

5. $3x^2 - 1 = 3 \cdot x \cdot x - 1$

6. $-5(x + 6) = -5 \cdot x - 30$

7. Three instances of a pattern are given. Describe the pattern using one variable.

$$(7 \cdot 2 - 2 \cdot 2) \div 5 = 5 \cdot 2 \div 5$$

$$(7 \cdot 3 - 2 \cdot 3) \div 5 = 5 \cdot 3 \div 5$$

$$(7 \cdot -1 - 2 \cdot -1) \div 5 = 5 \cdot -1 \div 5$$

In 8–10, evaluate each expression.

8. $3(4 - 1)^3$

9. $3(5 - 1)^3$

10. $3(3 - 1)^3$

11. Write another instance of the pattern shown by Questions 8–10.

In 12–14, three instances of a pattern are given. Describe the pattern using one variable.

12. $2(3 + 7) - 4 = 2 \cdot 3 + 10$

$$2(4 + 7) - 4 = 2 \cdot 4 + 10$$

$$2(5 + 7) - 4 = 2 \cdot 5 + 10$$

13. $3(2)^2 + 1 = 3 \cdot 2 \cdot 2 + 1$

$$3(1)^2 + 1 = 3 \cdot 1 \cdot 1 + 1$$

$$3(3)^2 + 1 = 3 \cdot 3 \cdot 3 + 1$$

14. $5^2 + 2(2 + 5) = 2 \cdot 2 + 7 \cdot 5$

$$5^2 + 2(3 + 5) = 2 \cdot 3 + 7 \cdot 5$$

$$5^2 + 2(4 + 5) = 2 \cdot 4 + 7 \cdot 5$$

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1-2B**page 2****PROPERTIES** Objective G

15. Use the Commutative Property of Multiplication to find another expression that gives the same value as $-3x \cdot 5y$.
- _____
16. The cost of a T-shirt is \$15 and the cost of a hat is \$12. Ingrid calculated the cost of s T-shirts and h hats using the expression $15s + 12h$. Josh calculated the cost using the expression $12h + 15s$. Which property tells you that Ingrid and Josh both calculated the cost correctly?
- _____
17. Use the Commutative Property of Addition to find another expression that gives the same value as $4m + n$.
- _____

USES Objective H

18. Jonathon works as a salesman in a large appliance store. He earns \$400 a week plus 10% of any sales he makes.
- a. Write an expression for his weekly earnings if he sells a dollars worth of appliances. _____
- b. How much did he earn in the week he sold \$1,500 worth of appliances? _____
19. Amy is considering a job selling cars. Her monthly salary would be \$2,500. If she sells a new car, her average commission would be \$400. For a used car, her average commission would be \$600. Write an expression for the total amount she would earn if she sells N new cars and U used cars in a month. _____
20. Tori plays for the Lakeland Ladies basketball team.
- a. Write an expression for the total number of points she scores if she makes f foul shots (1 point), t 2-point shots, and T 3-point shots. _____
- b. What was her total number of points in the game if she made four foul shots, five 2-point shots, and one 3-point shot? _____