NAME _____ DATE _____ PERIOD ____

1-6 Practice

Commutative and Associative Properties

Evaluate each expression.

1. $13 + 23 + 12 + 7$

2. $6 \cdot 5 \cdot 10 \cdot 3$

3. $7.6 + 3.2 + 9.4 + 1.3$

4. $3.6 \cdot 0.7 \cdot 5$

5. $7\frac{1}{9} + 2 + 1\frac{2}{9}$

6. $3\frac{3}{4} \cdot 3\frac{1}{3} \cdot 16$

Simplify each expression.

7. $9s^2 + 3t + s^2 + t$

8. $(p + 2n) + 7p$

9. $6y + 2(4y + 6)$

10. $2(3x + y) + 5(x + 2y)$

11. $3(2c + d) + 4(c + 4d)$

12. $6s + 2(t + 3s) + 5(s + 4t)$

13. $5(0.6b + 0.4c) + b$

14. $\frac{1}{2}q + 2\left(\frac{1}{4}q + \frac{1}{2}r\right)$

15. Write an algebraic expression for *four times the sum of 2a and b increased by twice the sum of 6a and 2b*. Then simplify, indicating the properties used.

SCHOOL SUPPLIES For Exercises 16 and 17, use the following information.

Kristen purchased two binders that cost $1.25 each, two binders that cost $4.75 each, two packages of paper that cost $1.50 per package, four blue pens that cost $1.15 each, and four pencils that cost $.35 each.

16. Write an expression to represent the total cost of supplies before tax.

17. What was the total cost of supplies before tax?

GEOMETRY For Exercises 18 and 19, use the following information.

The lengths of the sides of a pentagon in inches are 1.25, 0.9, 2.5, 1.1, and 0.25.

18. Using the commutative and associative properties to group the terms in a way that makes evaluation convenient, write an expression to represent the perimeter of the pentagon.

19. What is the perimeter of the pentagon?