

Name: _____

Practice & Problem Solving

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Leveled Practice In 13–18, use the order of operations to evaluate.

13. $4^2 - (3.1 + 6.4) + 4.5$

$$\begin{aligned}
 &= 4^2 - \boxed{} + 4.5 \\
 &= \boxed{} - \boxed{} + 4.5 \\
 &= \boxed{} + 4.5 \\
 &= \boxed{}
 \end{aligned}$$

14. $(8.7 + 3.3) \times \left(\frac{1}{2}\right)^2$

$$\begin{aligned}
 &= \boxed{} \times \left(\frac{1}{2}\right)^2 \\
 &= \boxed{} \times \boxed{} \\
 &= \boxed{}
 \end{aligned}$$

15. $157.8 - (3^2 + 6) \times 3$

$$\begin{aligned}
 &= 157.8 - (\boxed{} + 6) \times 3 \\
 &= 157.8 - \boxed{} \times 3 \\
 &= 157.8 - \boxed{} \\
 &= \boxed{}
 \end{aligned}$$

16. $4.3 + (8.4 - 5.1)$

17. $1.25 \times 4 + 3 \times 2 \div \left(\frac{1}{2}\right)^3$

18. $[2^3 \times (152 \div 8)] - 52$

In 19–21, insert grouping symbols so that the expression has the given value.

19. Target value: 32

$$2 \times 9 + 7$$

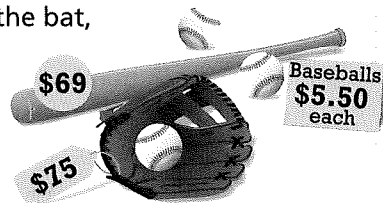
20. Target value: 6

$$\frac{1}{3} \times 21 - 3$$

21. Target value: 43

$$2.5 + 5 \times 6 - 2$$

22. Cory bought some baseball equipment. He used a coupon for $\frac{1}{2}$ off the price of the bat and glove. Write and evaluate a numerical expression to find the total cost of the bat, the glove, and 3 baseballs.



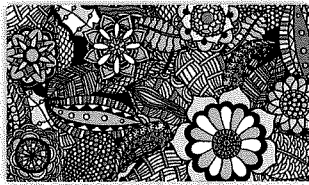
23. **Make Sense and Persevere** Write a numerical expression, with at least three operations, that has the same value as the following expression. Justify your answer.

$$5 + (8 - 4) \div 2 + 3$$

24. **Use Structure** How do you know which part of the numerical expression to evaluate first? Explain.

$$(26 + 2.5) - [(8.3 \times 3) + (1^3 - 0.25)]$$

26. The width of the rectangular drawing is one-third the length plus 3 inches. What is the perimeter of the drawing? Write and evaluate an expression to solve the problem.



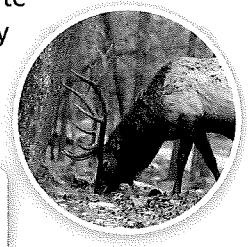
12 in.

28. **Model with Math** Lillian bought four hairbrushes at \$3.99 each. She had a coupon for \$1 off. Her mom paid for half of the remaining cost. Write and evaluate a numerical expression to find how much Lillian paid toward the purchase of the hairbrushes.

25. **Construct Arguments** Evan says that the value of the numerical expression $0.2^2 + 12 \div (1.5 \times 4)$ is 32.04. Do you agree? Explain.

27. **Higher Order Thinking** Frederick evaluates the numerical expression $[(53.7 + 37.2) - (3^3 + 3.8)] - 8.6$ and records the answer as 51.5. Lana evaluates the numerical expression $53.7 + 37.2 - 3^3 + 3.8 - 8.6$ and records the answer as 59.1. The expressions have the same numbers and operations. Explain how Frederick and Lana can both be correct.

29. In an ecosystem, some animals get energy by eating plants. Write and evaluate an expression to find how many pounds of plants a herd of 18 elk can eat in one week.



An elk can eat 20 pounds of plants each day.

Assessment Practice

30. Match each number on the right to the equivalent numerical expression on the left.

$$12.3 \times [(2 \times 1.7) + 6.6]$$

21

$$2^4 \div [(3.2 \times 0.8) + 1.44]$$

12

$$6.2 + \left(3 \times \frac{1}{3} + 4.8\right)$$

123

$$[4 \times (9.6 \div 3)] + 8.2$$

4

31. Match each number on the right to the equivalent numerical expression on the left.

$$[4 \times (6.6 \div 3)] + 18$$

11.12

$$18.9 \times [(2 \times 2.7) - 4.6] - 2^2$$

34.8

$$3^3 \div [(2.6 \times 0.7) + 1.18]$$

9

$$6.9 + (2 \times 4^2 - 4.1)$$

26.8

