

Practice C

For use with pages 16–22

Evaluate the expression for the given value(s) of the variable(s).

1. $4x^2 + 9$ when $x = 4$
2. $\frac{a}{3} \cdot 7$ when $a = 15$
3. $16y - y^3$ when $y = 3$
4. $6 + z^4 \div z$ when $z = 2$
5. $x^3 - \frac{x}{3} \cdot 4$ when $x = 2$
6. $6t^2 + s$ when $s = \frac{2}{3}$ and $t = \frac{1}{2}$
7. $3y - x^2 \cdot 4$ when $x = 2$ and $y = 6$
8. $a^2 - b \div 4$ when $a = 5$ and $b = 8$
9. $\frac{2a + b}{3}$ when $a = 4$ and $b = 1$

Evaluate the expression.

10. $28 \div 7 \cdot 2$
11. $18 + 54 \div 6$
12. $4 \cdot 9 - 30 \div 6$
13. $8 + 4^3 \div 8 - 3$
14. $2^5 - 4 \div \frac{4}{5} + 11$
15. $2[(9 + 5) - 12] \div 4$
16. $9 \div \left[\frac{2}{3}(11 - 2)^2 \right]$
17. $0.25 + 0.75(6^2 - 2^3)$
18. $3[2(13 - 9) + 8] + 2$

Two calculators were used to evaluate the expression. They gave different results. Which calculator used the established order of operations?

19. $30 \square 20 \square 5 \square 3 \text{ [ENTER]}$

Calculator 1: 6 Calculator 2: 18

20. $4 \square 5 \square 2 \square 9 \text{ [ENTER]}$

Calculator 1: 109 Calculator 2: 409

21. $2 \square 3 \square 2 \square 15 \square 3 \text{ [ENTER]}$

Calculator 1: 7 Calculator 2: 13

22. $12 \square 36 \square 2 \square 2 \square 3 \text{ [ENTER]}$

Calculator 1: 15 Calculator 2: 192

23. **Bowling** During a bowling tournament, Kelly bowls games with scores of 131, 166, and 120. Write an expression that represents his average bowling score. Evaluate the expression.

24. **Sales Tax** You want to buy a newly released CD. The CD costs \$14.95 plus 5.5% tax. Write an expression that represents how much money in dollars you need to buy the CD. Evaluate the expression. Round to the nearest cent.

25. **Fish Tank** You have two fish tanks. The first has a length of 4 feet, a width of 1.5 feet, and a height of 2.5 feet. The second has a length of 3 feet, a width of 2 feet, and a height of .75 foot. Write an expression that represents the amount of water in cubic feet both tanks will hold. Evaluate the expression.

