Skill and Concept Check

1. **Identify** the operation that should be done first in each expression.
   a. $9 \div 3 + (14 - 7)$
   b. $3 + 24 \div 3 \cdot 4$

2. **OPEN ENDED** Write an expression containing five numbers that is evaluated by first multiplying.

3. **FIND THE ERROR** Yutaka and Cynthia are evaluating $16 - 24 \div 6 \cdot 2$. Who is correct? Explain your reasoning.

Yutaka
$16 - 24 \div 6 \cdot 2$
$= 16 - 24 \div 12$
$= 16 - 2$ or 14

Cynthia
$16 - 24 \div 6 \cdot 2$
$= 16 - 4 \cdot 2$
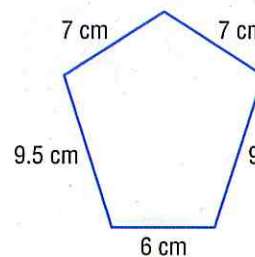$= 16 - 8$ or 8

GUIDED PRACTICE

Evaluate each expression.

4. $11 - (3 \cdot 2)$
5. $25 \div (9 - 4)$
6. $8 - 4 + 3.7$
7. $2 + 5 \cdot 5$
8. $14 \div 2 \cdot 6$
9. $8 \cdot 5 - 4 \cdot 3$
10. 4×10^2
11. $3.5 \times 5 + 6^2$
12. $7 + 4(5.6 - 2) - 9$

13. Evaluate $(16 \div 4)^3 - 6$.

14. Find the value of $(6 + 8) \div (10 - 8)$.

Practice and Applications

Evaluate each expression.

15. $(1 + 8) \times 3$
16. $10 - (3 + 4)$
17. $(25 \div 5) + 8$
18. $(11 - 2) \div 9$
19. $3 \cdot 2 + 7$
20. $15 \div 3 + 4$
21. $12 + 6.6 \div 3$
22. $18 - 3 \cdot 6$
23. $8 - 7.2 + 5$
24. $28 \div 7(5)$
25. $(17 + 3) \div (4 + 1)$
26. $(6 + 5) \cdot (8 - 6)$
27. $21 \div 3 \times 2 - 4$
28. $35 \div 5 + 56 \div 7$
29. $2 \times 9 - 4^2$
30. $24 \div 3 + 5^3$
31. $7 + (8 - 7 + 2)^4$
32. $(2 + 10)^2 \div 4$
33. 6×10^2
34. 18×10^3
35. 1.95×10^2
36. 3.7×10^4
37. $6 + 2(9.4 - 1)$
38. $3(4.5 + 7.2) - 5 \cdot 4$
39. $72 \div 3 - 5(8.8 - 6) + 9$
40. $9 \div 3 \cdot 14(10 - 8) - 60$

41. **GEOMETRY** The distance around a geometric figure is called its *perimeter*. Write a numerical expression to find the perimeter of the figure at the right. Then evaluate the expression.

42. **MARATHONS** On Mondays, Wednesdays, and Thursdays, Jacob trains for a marathon for 3.5 hours. On Tuesdays and Fridays, he trains for 2 hours, and on Saturdays, he trains for 4.5 hours. How many hours does Jacob train per week?

7 cm   7 cm
9.5 cm
6 cm