e. $4 \times \$4 + 4 \times \$1 + 4 \times \$2; \$28$

e. Alexis and 3 friends are at the mall. Each person buys a pretzel for $4, sauce for $1, and a drink for $2. Write an expression for the total and find the total cost.

Guided Practice

Find the value of each expression. (Examples 1–5)

1. $9 + 3 - 5 =$

7

$12 - 5 = 7$

2. $(26 + 5) \times 2 - 15 =$

47

$(31) \times 2 - 15$

$62 - 15 = 47$

3. $5^2 + 8 \div 2 =$

29

$25 + 8 \div 2$

$25 + 4 = 29$

1 E
2 D
3 A

4. Financial Literacy Tickets to a play cost $10 for members and $24 for nonmembers. Write an expression to find the total cost of 4 nonmember tickets and 2 member tickets. Then find the total cost. (Example 6)

$4 \times 24 + 2 \times 10; \$116$

5. Building on the Essential Question How are grouping symbols helpful in simplifying expressions correctly?

Sample answer: Grouping symbols like parentheses help identify the expression(s) that must first be simplified.

Find the value of each expression. (Examples 1–5)

1. $8 + 4 - 3 =$ **9**

2. $38 - 19 + 12 =$ **31**

19 + 12

PEMDAS

3. $7 + 9 \times (3 + 8) =$ **106**

7 + 9 × (11)

7 + 99

4. $15 - 2^3 \div 4 =$ **13**

15 − 8 ÷ 4

15 − 2

5 $55 \div 11 + 7 \times (2 + 14) =$ **117**

$55 \div 11 + 7 \times (16)$

$5 + 112$

6. $5^3 - 12 \div 3 =$ **121**

7. $8 \times (2^4 - 3) + 8 =$ **112**

8. $9 + 4^3 \times (20 - 8) \div 2 + 6 =$ **399**

$9 + 64 \times 12 \div 2 + 6$

$9 + 768 \div 2 + 6$

$9 + 384 + 6$

9. **Financial Literacy** Tyree and four friends go to the movies. Each person buys a movie ticket for $7, a snack for $5, and a drink for $2. Write an expression for the total cost of the trip to the movies. Then find the total cost. (Example 6)

$5 \times \$7 + 5 \times \$5 + 5 \times \$2$; \$70

10. **Financial Literacy** The Molina family went to a concert together. They purchased 4 concert tickets for $25 each, 3 T-shirts for $15 each, and a poster for $10. Write an expression for the total cost. Then find the total cost. (Example 6)

$4 \times \$25 + 3 \times \$15 + \$10$; \$155

11 CCSS **Use Math Tools** A wholesaler sells rolls of fruit snacks in two sizes of bags. The table shows the number of rolls that come in each bag. Write an expression that could be used to determine the number of rolls in 3 large bags and 2 small bags. Then find the number of rolls.

Bag	Number of Rolls
Large	10
Small	5

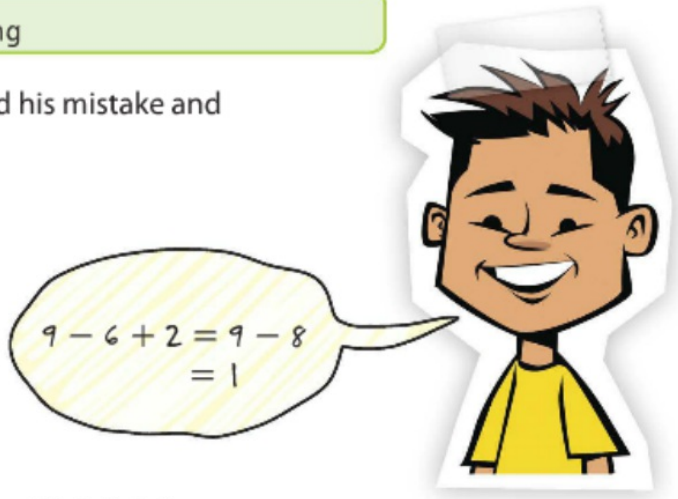
$3 \times 10 + 2 \times 5$; 40 rolls

H.O.T. Problems Higher Order Thinking

12. CCSS **Find the Error** Luis is finding $9 - 6 + 2$. Find his mistake and correct it.

Luis did not add and/or subtract in order from left to right.

$9 - 6 + 2 = 3 + 2 = 5$



13. CCSS **Reason Inductively** Use the expression $34 - 12 \div 2 + 7$.

a. Place parentheses in the expression so that the value of the expression is 18. **$(34 - 12) \div 2 + 7$**

b. Place parentheses in the expression to find a value other than 18. Then find the value of the new expression. **Sample answer:**

$34 - (12 \div 2) + 7 = 34 - 6 + 7 = 28 + 7 = 35$

14. **Persevere with Problems** Write an expression with a value of 12. It should contain four numbers and two different operations. **Sample answer: $35 \div 5 + 10 \div 2$**

15. **Use Math Tools** Place parentheses in each equation, if needed, to make each equation true.

a. $7 + 3 \times 2 + 4 = 25$ **$7 + 3 \times (2 + 4) = 25$**

b. $8^2 \div 4 \times 8 = 2$ **$8^2 \div (4 \times 8) = 2$**

c. $16 + 8 - 5 \times 2 = 14$ **parentheses not needed**

16. **Which One Doesn't Belong?** Which expression does not belong with the other three? Justify your response.

$6^2 - 9$ 3^3 $(5 + 4)^2 \div 3$ $4 \times 5 + 9$

$4 \times 5 + 9$; The other expressions have a value of 27.