## 3.2 Practice B

**1.** $8 + 5$ or $5 + 8$

**2.** $24 - 11$

**3.** $6y$ or $y \cdot 6$

**4.** $\frac{n}{7}$

**5.** $8 + e$ or $e + 8$

**6.** $2n + 6$

**7.** $x - 13$

**8.** $3m - 7$

**9.** $f + 3$ or $3 + f$

**10.** $25 - w$

**11.** $2 + 2 \cdot 6$

**12.** $16 - 3.20$

**13.** $\frac{24}{x} + 15$; 18 **14.** $\frac{y + 30}{5}$; 10 **15.** $2(x + 9)$; 34

**16.** A; The next number is three more than the previous number.

**17. a.** 3 eggs **b.** $24x - 5$

**c.** 14 is the number of bags, 5 is the number of cookies in each bag, 2 is the number of cookies that are not needed to fill the bags, 3 is the number of batches, and 24 the number of cookies in each batch or recipe.

### 3.3 Practice B

**1.** $16 + (f + 4) = 16 + (4 + f)$ Commutative Property of Addition

$= (16 + 4) + f$ Associative Property of Addition

$= 20 + f$ Add 16 and 4.

**2.** $(3y) \cdot 9 = 9 \cdot (3y)$ Commutative Property of Multiplication

$= (9 \cdot 3)y$ Associative Property of Multiplication

$= 27y$ Multiply 9 and 3.

**3.** $5(8y) = (5 \cdot 8)y$ Associative Property of Multiplication

$= 40y$ Multiply 8 and 5.

**4.** $(0 + n) + 15 = (n + 0) + 15$ Commutative Property of Addition

$= n + (0 + 15)$ Associative Property of Addition

$= n + 15$ Addition Property of Zero

**5.** $(21 \cdot y) \cdot 1 = 1 \cdot (21 \cdot y)$ Commutative Property of Multiplication

$= (1 \cdot 21)y$ Associative Property of Multiplication

$= 21y$ Multiplication Property of One

**6.** $10 \cdot x \cdot 4 = 10 \cdot (x \cdot 4)$ Associative Property of Multiplication

$= 10 \cdot (4 \cdot x)$ Commutative Property of Multiplication

$= (10 \cdot 4) \cdot x$ Associative Property of Multiplication

$= 40x$ Multiply 10 and 4.

**7.** $34 \cdot y \cdot 0 = 34 \cdot (y \cdot 0)$ Associative Property of Multiplication

$= 34 \cdot 0$ Multiplication Property of Zero

$= 0$ Multiplication Property of Zero

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**8.** $35 + (p + 5) = 35 + (5 + p)$ Commutative Property of Addition

$= (35 + 5) + p$ Associative Property of Addition

$= 40 + p$ Add 35 and 5.

**9.** $11 + h$ **10.** $k \cdot 12$ **11.** $(21 + 9) + 8$

**12.** $(12 \cdot 5) \cdot 4$ **13.** $18 \cdot w$ **14.** $26 + c$

**15.** The change in grouping shows the Associative Property of Multiplication.

**16. a.** $21 + 19 + n$

**b.** $21 + 19 + n = (21 + 19) + n$ Associative Property of Addition

$= 40 + n$ Add 21 and 19.

**17.** $37 + t + 29 = 66 + t$

### 3.4 Practice A

1. 115
2. 150
3. 486
4. 413
5. $\frac{1}{3}\left(2+\frac{3}{4}\right)=\frac{11}{12}$
6. $\frac{2}{5}\left(3+\frac{1}{2}\right)=1\frac{2}{5}$
7. $\frac{3}{8}\left(5+\frac{2}{3}\right)=2\frac{1}{8}$
8. $4x + 24$
9. $8c - 40$
10. $14y + 56$
11. $9e - 36$
12. $24 + 6n$
13. $21 + 7x + 28 = 7x + 49$
14. 5 must be multiplied by both $x$ and 9; $5x + 45$
15. C; You need to add the two activities and then multiply the sum by 5.
16. $5(r + 3) = 5r + 15$
17. $9w + 54 + 4 = 9w + 58$
18. $15 + 5m - 7 = 5m + 8$
19. $11m + 7$
20. $5f - 8$
21. $1\frac{7}{8}x$
22. $3.1p - 8.37$
23. area: $5(x + 2) = 5x + 10$

    perimeter: $2(5) + 2(x + 2) = 2x + 14$

### Extension 3.4 Practice

1. $13(3 - 1)$
2. $5(1 + 2)$
3. $3(5 - 3)$
4. $15(3 + 2)$
5. $7(7 - 2)$
6. $6(16 - 5)$
7. $10(12 + 5)$
8. $3(x + 3)$
9. $8(3x - 2)$
10. $3(2x - 15)$
11. $6(3x + 1)$
12. $17(x + 3)$
13. $2(4x - 5y)$
14. $9(3x - 2y)$
15. $14(3x + 2y)$
16. C
17. $2(10x + 50)$, $4(5x + 25)$, $5(4x + 20)$

    $10(2x + 10)$, $20(x + 5)$
18. The width is $(x + 3)$.
19. The additional cost is \$5.