

**Practice****Commutative and Associative Properties**

*Name the property illustrated by each statement.*

1.  $x + y = y + x$

2.  $5(m \cdot n) = (5 \cdot m)n$

3.  $k + 0 = k$

4.  $3t + 2r = 2r + 3t$

5.  $6(u + 2v) = 6u + 12v$

6.  $0 = 100 \cdot 0$

7.  $(2a + 3b) + 4c = 2a + (3b + 4c)$

8.  $pq + n = qp + n$

9.  $gx = xg$

10.  $15(c + d) = 15(d + c)$

*Simplify.*

11.  $2x + 5y + 9x$

12.  $a + 9b + 6a$

13.  $2p + 3q + 5p + 2q$

14.  $\frac{3}{4}x + z + \frac{1}{4}x$

15.  $3j + 4k + 2l + 6k$

16.  $\frac{2}{5}m^2 + 3m + m^2$

17.  $6 + 3xz + 4(xz + y)$

18.  $3(2pq + 3r) + 4pq$

19.  $\frac{1}{3}x + \frac{1}{5}y + \frac{1}{2}z + \frac{4}{5}y$

20.  $0.5x + 0.2y + x$

21.  $2(2e + f) + 3f + 1$

22.  $3 + 2(r + s) + 2r$

23.  $r + 3s + 5r + s$

24.  $6k^2 + 6k + k^2 + 9k$

25.  $4p + 3(3p + 5) + 5$

26.  $9 + 3(xz + 2y) + xz$

27.  $5(0.6m + 0.4n) + m$

28.  $4(2a + b) + 2(a + 2b)$