

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