

Lesson 4-3: Simplify Expressions

1. Sample answer: Properties of operations are used to reorder the terms of an expression in order to group and combine like terms.
2. Sample answer: Rational numbers are constants, so they are like terms and can be combined. They may need to be expressed in the same form - for example, as all fractions or all decimals.
3. Sample answer: An expression is in its simplest form when it has no like terms.
4. $-7b - 9k + 6$
5. $3.2z - 8$
6. $-\frac{5}{3}y - 3$
7. $-1.9f - 16$
8. $-8.1n + 8.2$
9. $1.1n + 4.5p - 2.5$
10. $13 - \frac{6}{5}j$
11. C
12. D
13. $x + x + \frac{1}{2}x - 7 + \frac{1}{2}x - 7$
14. $-2.3d + 4.8h - 14$
15. $-10y + 10.2$
16. $-\frac{4}{9}z - 3$
17. Sample answer: $11t - 4t$ is not equivalent to $4t - 11t$ because the negative sign belongs to $-11t$. For $t = 2$, $11t - 4t$ is equal to $11(2) - 4(2) = 22 - 8 = 14$ and $4t - 11t$ is equal to $4(2) - 11(2) = 8 - 22 = -14$.
18. $21.70 - \frac{3}{4}n$
19. Sample answer: When b is a fraction that converts to a repeating decimal, such as $\frac{1}{3}$, it is more precise to convert a to a fraction. If you can write a as a fraction with the same denominator as b , then it is easy to combine the like terms.
20. B, C, E