Answers and talk notes

Simplify Algebraic Expressions

What your student is learning

Tonight we make an expression shorter by combining like terms. Like terms are terms that have the same variable and exponent.

Answers

Ask your student to explain before you look.

1. **B.** 4x and 9x. 4x and 9x both have the variable x, so they are like terms.
2. **C.** 7a. 5 + 2 = 7, and the variable stays, so 7a.
3. **A.** 6. The coefficient of m is the number multiplying it, which is 6.
4. **C.** 5x + 5. 3x + 2x = 5x and 4 + 1 = 5, so 5x + 5.
5. **D.** 5y + 3. 9y – 4y = 5y, and the plain 3 stays, so 5y + 3.
6. **B.** 8a + 6p. Apples: 3a + 5a = 8a. Pears: 4p + 2p = 6p. Together: 8a + 6p.

Talk about it

Does a microphone count the same thing as a stand?

Home mission

Use spoons for microphones and forks for stands. Make piles of 4 spoons and 3 forks, 2 and 5, and 6 and 1. How many spoons and forks in all?

When they are stuck, ask

- Which terms have the same variable and exponent? Only those can be combined.
- When we combine, we add the numbers in front and keep the letter the same.
- Does this number have a letter? If not, it stays on its own.

Try not to say

- Just add every number you see together.
- 3x + 5 combines into 8x.
- When you add 4x + 3x you get $7x^2$ (change the little number).