

Lesson 6-15

Reinforce Understanding

Simplify Algebraic Expressions

I can simplify algebraic expressions by combining like terms.

Worked model

The rooms need microphones and stands: $(4 + 2 + 6)$ microphones and $(3 + 5 + 1)$ stands.

1. Microphones are like items, so I add: $4 + 2 + 6 = 12$ microphones.
2. Stands are like items, so I add: $3 + 5 + 1 = 9$ stands.
3. In algebra this is the same as $4m + 2m + 6m + 3s + 5s + 1s = 12m + 9s$.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Sort each pair of terms by whether they are like terms (can be combined) or not.

Write the name of the correct group on each line.

Groups: Like Terms Not Like Terms

- _____ 4m and 7m
- _____ 3x and 3y
- _____ 5n and n
- _____ 8 and 2p
- _____ 6a and 9a
- _____ $2x^2$ and 2x

2. Simplify $7x + 3x$.

Circle the letter of the best answer. Show how you know.

- A. $10x$
- B. $10x^2$
- C. $21x$
- D. $73x$

Show your work

3. Simplify $9n + 4 + 2n$.

Circle the letter of the best answer. Show how you know.

- A. $11n + 4$
- B. $11n^2 + 4$
- C. $15n$
- D. $92n + 4$

Show your work
