

NAME \_\_\_\_\_

DATE \_\_\_\_\_

**Module 12** Simplifying Algebraic Expressions  
by Factoring Polynomials

**Lesson 5** Factoring  $ax^2 + bx + c$



**guided  
notes**

**Lesson Objectives**

- Factor trinomials of the form  $ax^2 + bx + c$ , where  $a \neq 0, 1$ , using the Guess and Check method.
- Factor trinomials of the form  $ax^2 + bx + c$ , where  $a \neq 0, 1$ , using the Grouping method.

The pairs of trial factors of  $2x^2 + 5x + 3$  are \_\_\_\_\_

and \_\_\_\_\_.

$2x^2 + 5x + 3$  factors into \_\_\_\_\_.

Factoring  $ax^2 + bx + c$  using the *guess-and-check* method:

1. Guess first term
2. Guess last term
3. \_\_\_\_\_
4. Repeat steps 1–3, if needed

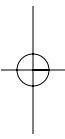
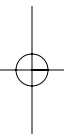
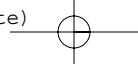
**1** Factor using the *guess-and-check* method:  $5m^2 - 4m - 1 =$  \_\_\_\_\_

Factoring  $ax^2 + bx + c$  using the *grouping* method:

1. Product: \_\_\_\_\_, Sum: \_\_\_\_\_
2. Rewrite \_\_\_\_\_ as two terms
3. Factor by \_\_\_\_\_
4. Check

**2** Factor using the *grouping* method:  $3x^2 + x - 10 =$  \_\_\_\_\_

**3** Factor using the *grouping* method:  $8d^2 + 10d - 25 =$  \_\_\_\_\_



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