**Module 11** Simplifying Algebraic Expressions
with Polynomials
**Lesson 7** Dividing Polynomials Using Long
Division

guided
notes

## Lesson Objective

• Divide polynomials using long division.

The quantity that is being divided is called the **dividend**.

The quantity that is being divided by is called the **divisor**.

Before beginning a polynomial long division problem, write the dividend

and divisor in **descending order**.

The five steps to complete a long division problem:

1. **Divide first terms**

2. **Multiply**

3. **Subtract**

4. **Bring down**

5. **Repeat**

If there is a remainder, write the answer as the quotient +
**remainder**
  **divisor**
.

If the dividend is missing a term, insert zero as a placeholder for the

**missing term**.

**1** Divide: $(x^2 + 3x - 18) \div (x + 6)$

**$x - 3$**

**2** Divide: $(8 + 4x^2) \div (2x + 1)$

**$2x - 1 + \dfrac{9}{2x + 1}$**