Lesson 12: Estimating Digits in a Quotient

Classwork

Opening Exercise

Show an example of how you would solve . You can use any method or model to show your work. Just be sure that you can explain how you arrived at your solution.

**Example 1**

We can also use estimates before we divide to help us solve division problems. In this lesson, we will be using estimation to help us divide two numbers using the division algorithm.

Estimate the quotient of . Then, divide.

Create a model to show the division of by .

**Example 2**

Use estimation and the standard algorithm to divide: .

Exercises 1–4

* 1. Estimate the quotient.
	2. Use the algorithm to divide. Draw a model to show how the steps relate to the steps used in the algorithm.

* 1. Check your work.

* 1. Estimate the quotient.
	2. Use the algorithm to divide. Draw a model to show how the steps relate to the steps used in the algorithm.
	3. Check your work.
	4. Estimate the quotient.
	5. Use the algorithm to divide.
	6. Check your work.
	7. Estimate the quotient.
	8. Use the algorithm to divide.
	9. Check your work.

Problem Set

Complete the following steps for each problem:

* 1. Estimate the quotient.
	2. Use the division algorithm to solve.
	3. Show a model that supports your work with the division algorithm.
	4. Check your work.