Divide by 2-Digit Divisors

When you divide by a 2-digit divisor, you can use estimation to help you place the first digit in the quotient. Then you can divide.

Divide. $53\overline{)2,369}$

Step 1 Use compatible numbers to estimate the quotient. Then use the estimate to place the first digit in the quotient.

$$\begin{array}{r} 40 \\ 50\overline{)2,000} \end{array}$$

The first digit will be in the tens place.

Step 2 Divide the tens.

$$\begin{array}{r} 4 \\ 53\overline{)2,369} \\ -\ 212 \\ \hline 24 \end{array}$$

Think:

Divide: 236 tens ÷ 53

Multiply: 53 × 4 tens = 212 tens

Subtract: 236 tens − 212 tens

Compare: 24 < 53, so the first digit of the quotient is reasonable.

Step 3 Bring down the 9 ones. Then divide the ones.

$$\begin{array}{r} 44 \text{ r}37 \\ 53\overline{)2,369} \\ -\ 212\downarrow \\ \hline 249 \\ -\ 212 \\ \hline 37 \end{array}$$

Think:

Divide: 249 ones ÷ 53

Multiply: 53 × 4 ones = 212 ones

Subtract: 249 ones − 212 ones

Compare: 37 < 53, so the second digit of the quotient is reasonable.

Write the remainder to the right of the whole number part of the quotient.

So, 2,369 ÷ 53 is **44 r37**.

Divide. Check your answer.

1. $52\overline{)612}$

2. $63\overline{)917}$

3. $89\overline{)1,597}$

4. $43\overline{)641}$

5. $27\overline{)4,684}$

6. $64\overline{)8,455}$