

G5-M2-Lesson 21

1. Divide. Then check using multiplication.

a. $235 \div 68$

I can find the estimated quotient and then divide using the long division algorithm.

I can estimate to find the quotient. $210 \div 70 = 3$

I'll use the quotient of 3. 3 groups of 68 is 204, and the difference between 235 and 204 is 31. The remainder is 31.

$$\begin{array}{r} 3 \text{ R } 31 \\ 68 \overline{) 235} \\ \underline{- 204} \\ 31 \end{array}$$

Check:

$$\begin{array}{r} 68 \\ \times 3 \\ \hline 204 \end{array} \qquad \begin{array}{r} 204 \\ + 31 \\ \hline 235 \end{array}$$

After checking, I see that 235 does match the original dividend in the problem.

b. $125 \div 32$

I estimate to find the quotient. $120 \div 30 = 4$. Therefore, there should be about 4 units of 32 in 125.

When I use the estimated quotient of 4, I see that 4 groups of 32 is 128. 128 is more than the original dividend of 125. That means I over estimated. The quotient of 4 is too high.

$$\begin{array}{r} 4 \\ 32 \overline{) 125} \\ \underline{- 128} \\ ? \end{array}$$



$$\begin{array}{r} 3 \text{ R } 29 \\ 32 \overline{) 125} \\ \underline{- 96} \\ 29 \end{array}$$

Since the quotient of 4 is too much, I'll try 3 as the quotient. 3 groups of 32 is 96. The difference between 125 and 96 is 29. The remainder is 29.

The actual quotient is 3 with a remainder of 29.

Check:

To check, I'll multiply the divisor and the quotient and then add the remainder.

$$\begin{array}{r} 32 \\ \times 3 \\ \hline 96 \end{array}$$

$$\begin{array}{r} 96 \\ + 29 \\ \hline 125 \end{array}$$

I can use division to find how many 49's are in 159. First, I should estimate to find the quotient.
 $150 \div 50 = 3$

2. How many forty-nines are in one hundred fifty-nine?

$$\begin{array}{r} 3 \text{ R } 12 \\ 49 \overline{) 159} \\ - 147 \\ \hline 12 \end{array}$$

There are 3 groups of forty-nine in 159, with a remainder of 12.

12 is the remainder, and it will need 37 more to make another group of 49.

There are 3 groups of forty-nine in 159.