

Lesson 2-6

Reinforce Understanding

Divide Multi-Digit Numbers Using an Algorithm

I can divide multi-digit whole numbers and explain the meaning of the quotient and remainder.

Worked model

I want $1,344 \div 12$. The dividend is 1,344 and the divisor is 12, so 12 goes outside the bracket and 1,344 goes inside.

1. DIVIDE: 12 does not fit into 1, so I look at 13. How many 12s fit into 13? One. I write 1 above the 3.
2. MULTIPLY: $1 \times 12 = 12$. I write 12 underneath the 13.
3. SUBTRACT: $13 - 12 = 1$. That is what is left so far.
4. BRING DOWN: I bring the next digit, 4, down next to the 1 to make 14. Now I repeat the cycle.
5. REPEAT: $14 \div 12 \rightarrow 1$ (written above the 4), $1 \times 12 = 12$, $14 - 12 = 2$, and I bring down the last 4 to make 24.
6. REPEAT: $24 \div 12 \rightarrow 2$ (written above the last 4), $2 \times 12 = 24$, $24 - 24 = 0$. Nothing is left to bring down, so the remainder is 0.
7. The digits I wrote are 1, 1, 2, so $1,344 \div 12 = 112$. I check by multiplying: $12 \times 112 = 1,344$.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Run the long-division cycle. Fill in the quotient.

Complete the table. Show how you found each value.

Problem	Divide	Multiply & Subtract	Bring Down	Quotient
$384 \div 8$				
$672 \div 6$				

Show your work

2. What is $936 \div 12$?

Circle the letter of the best answer. Show how you know.

- A. 68
- B. 76
- C. 78
- D. 87

3. What is $2,485 \div 5$?

Circle the letter of the best answer. Show how you know.

- A. 487
- B. 496
- C. 497
- D. 507