Mastering Long Division

Subject: Math | Grade: 4 | Generated: February 05, 2026

■ Concept Explanation

Let's introduce some new vocabulary: 'equivalent' means having the same value, 'decimal' is a way of writing fractions with a point, and 'mixed number' is a combination of a whole number and a fraction. We'll use these terms as we work with long division. For example, if we have a remainder, we can write it as a fraction or a decimal, which are equivalent ways of showing the same value.

✏■ Worked Examples

Example 1

Problem: Divide 432 by 12

Solution:
Step 1: Divide 4 by 12, which gives us 0 with a remainder of 4.
Step 2: Bring down the 3 and divide 43 by 12, which gives us 3 with a remainder of 7.
Step 3: Bring down the 2 and divide 72 by 12, which gives us 6 with a remainder of 0.
So, 432 divided by 12 is 36 with no remainder.

Example 2

Problem: Divide 945 by 15

Solution:
Step 1: Divide 9 by 15, which gives us 0 with a remainder of 9.
Step 2: Bring down the 4 and divide 94 by 15, which gives us 6 with a remainder of 4.
Step 3: Bring down the 5 and divide 45 by 15, which gives us 3 with a remainder of 0.
So, 945 divided by 15 is 63 with no remainder.

Example 3

Problem: Divide 216 by 18

Solution:
Step 1: Divide 2 by 18, which gives us 0 with a remainder of 2.
Step 2: Bring down the 1 and divide 21 by 18, which gives us 1 with a remainder of 3.

Step 3: Bring down the 6 and divide 36 by 18, which gives us 2 with a remainder of 0.
So, 216 divided by 18 is 12 with no remainder.

■ Practice Questions

1. Divide 648 by 12 [EASY]

2. Divide 945 by 15 [MEDIUM]

3. Divide 1080 by 20 [EASY]

4. Divide 2700 by 30 [MEDIUM]

5. Divide 4320 by 40 [HARD]

6. Divide 630 by 10 [EASY]

7. Divide 2160 by 36 [MEDIUM]

■ Answer Key

For teacher/tutor reference

1. 54

2. 63

3. 54

4. 90

5. 108

6. 63

7. 60