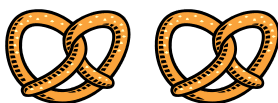


## Lesson 28: Division with Remainders

**Purpose of lesson:** You will learn to divide with remainders.

“A box of pretzels contains 12. I have 5 kids. Can they share them evenly? “



No, there will be 2 left over!

Feeding your family can sometimes be challenging. We know that  $5 \times 2 = 10$ . There are 2 pretzels left over, so the **remainder**, is 2. This is how we can write it  $12 \div 5 = 2 \text{ R } 2$ . A **quotient** has a remainder when a number cannot be divided evenly. Using your basic knowledge of the facts, what is the remainder for  $38 \div 4 = ?$  we know that  $4 \times 9 = 36$ .  $38 - 36 = 2$ , so there are 2 left over. The answer to  $38 \div 4 = 9 \text{ R } 2$ .

Let's try these.

### Take Lesson 28 Quiz 1

Sometimes you will see the problems written like this. You solve them the same way.

Example: 
$$\begin{array}{r} 9 \\ 4 \overline{)38} \text{ R}2 \end{array}$$

Let's try some more.

### Take Lesson 28 Quiz 2

The **remainder** can also be written as a **fraction**, or part of a whole. Just express the remainder as the **numerator**, or top of the fraction, and the **divisor** as the bottom of the fraction, or **denominator**. Try these!

It's easy! Look at the example:  $13 \div 4 = 3 \text{ R}1$  ( $3 \times 4 = 12$ , with one left over from 13)

- use 1 on top and 4 on the bottom - or  $3 \frac{1}{4}$  (sometimes displayed as  $3\frac{1}{4}$ ).

Example 1:  $75 \div 8 = 9\frac{3}{8}$  ( $9 \times 8 = 72$ ) - can be displayed as  $9 \frac{3}{8}$

Example 2:  $50 \div 6 = 8\frac{2}{6}$  ( $8 \times 6 = 48$ ) - can be displayed as  $8 \frac{2}{6}$

Example 3:  $27 \div 6 = 4\frac{3}{6}$  ( $4 \times 6 = 24$ ) - can be displayed as  $4 \frac{3}{6}$

### Take Lesson 28 Quiz 3