

Division in 4th and 5th Grade

Solving Using Partial Quotients

$$\begin{array}{r}
 15 \text{ r } 3 \\
 8 \overline{)123} \\
 \underline{-80} \quad | \quad 10 \\
 43 \\
 \underline{-40} \quad | \quad 5 \\
 3 \quad | \quad 15
 \end{array}$$

The numbers to the right of the "thinking line" show how many groups you have removed.

Here you see the number that remain after you have removed all of the whole groups

Add the groups you have removed to find the total number of whole groups.

Partial quotients with larger numbers.

$$\begin{array}{r}
 29 \text{ r } 2 \\
 13 \overline{)379} \\
 \underline{-130} \quad | \quad 10 \\
 249 \\
 \underline{-130} \quad | \quad 10 \\
 119 \\
 \underline{-65} \quad | \quad 5 \\
 54 \\
 \underline{-39} \quad | \quad 3 \\
 15 \\
 \underline{-13} \quad | \quad 1 \\
 2 \quad | \quad \textcircled{29}
 \end{array}$$

Ways We Represent Division

$$32 \div 8 = 4$$

$$\begin{array}{r}
 4 \\
 8 \overline{)32}
 \end{array}$$

$$\frac{32}{8} = 4$$

Connect Division to Multiplication

When you are trying to find division facts think about multiplication.

$$32 \div 8 = ?$$

Think, "What times 8 equals 32"

$$4 \times 8 = 32$$

So

$$32 \div 8 = 4$$

Multiplying Up

$$123 \div 8$$

"How many groups of 8 can I make from 123?"

$$10 \times 8 = 80$$

$$5 \times 8 = 40$$

$$80 + 40 = 120$$

$$123 - 120 = 3$$

"I can make 15 groups of 8 and 3 are extra."

Representing Remainders

$$15 \div 4 = 3 \text{ r } 3$$

15 tiles divided into 4 piles.
Three tiles in each pile.

Three tiles left over.

$$15 \div 4 = 3.75$$

15 kilograms split into 4 bags.

3.75 kilos per bag.

$$15 \div 4 = 3 \frac{3}{4}$$

15 pies split among 4 friends.

Each friend gets $3 \frac{3}{4}$ pies.