

Long Division

by Monica Yuskaitis



Long Division

- Long division is as simple as memorizing the people in this family.



Dad



Mom



Sister



Brother



Rover

Long Division

- Each person represents a step in the long division process.



Dad

1. Divide



Sister

3. Subtract



Brother

4. Bring down



Mom

2. Multiply



Rover

**5. Repeat or
Remainder**

Step 1 in Long Division



Dad

1. Divide

$$\begin{array}{r} 4 \\ 2 \overline{) 947} \end{array}$$

- Divide 2 into first number in the dividend.
- Think how many 2's will fit into 9.
- Write that number directly above the number you divided into.

How many 2's
will go into 9?



Step 2 in Long Division



Mom

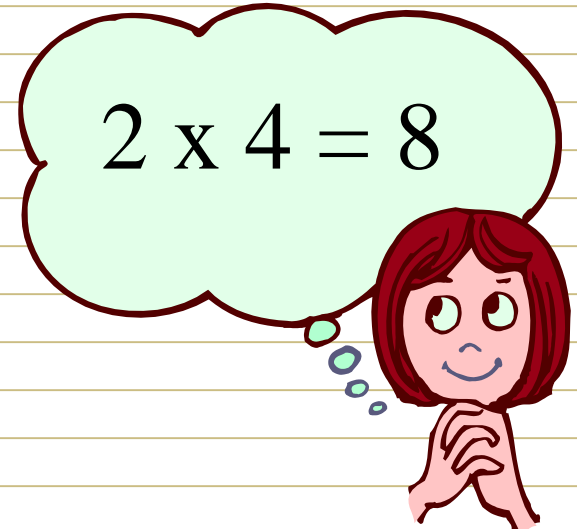
2. Multiply

$$\begin{array}{r} 2 \overline{) 947} \end{array}$$

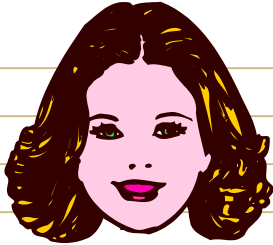
A red arrow points from the divisor 2 to the quotient digit 4. The number 8 is written below the 4.

- Multiply the divisor times the first number in the quotient.
- Write your answer directly under the 9 or the number you just divided into.

$$2 \times 4 = 8$$



Step 3 in Long Division



3. Subtract

Sister

- Draw a line under the 8.
- Write a subtraction sign next to the 8.
- Subtract 8 from 9.
- Write your answer directly below the 8.

$$\begin{array}{r} 4 \\ 2 \overline{) 947} \\ \underline{-8} \\ 1 \end{array}$$

Step 4 in Long Division



Brother **4. Bring
down**

- Go to the next number in the dividend to the right of the 9.
- Write an arrow under the 4.
- Bring the 4 down next to the 1.

$$\begin{array}{r} 4 \\ 2 \overline{) 947} \\ \underline{-8} \\ 14 \end{array}$$

Step 5 in Long Division



Rover

5. Repeat or Remainder

- This is where you decide whether you repeat the 5 steps of division.
- If your divisor can divide into your new number, 14, or if you have numbers in the dividend that have not been brought down, you repeat the 5 steps of division.

$$\begin{array}{r} 4 \\ 2 \overline{) 947} \\ \underline{-8} \downarrow \\ 14 \end{array}$$

Step 1 in Long Division



Dad

1. Divide

- Divide 2 into your new number, 14.
- Place your answer directly above the 4 in your quotient.

$$\begin{array}{r} 47 \\ 2 \overline{) 947} \\ \underline{-8} \downarrow \\ 14 \end{array}$$

Step 2 in Long Division



2. Multiply

Mom

- Multiply your divisor, 2, with your new number in the quotient, 7.
- Place your answer directly under the 14.

$$\begin{array}{r} 47 \\ 2 \overline{) 947} \\ \underline{-8} \\ 14 \\ \underline{14} \\ 0 \end{array}$$

The diagram shows a long division problem: 2 divided into 947. The quotient 47 is written above the line. A red arrow points from the 4 in the quotient to the 8 in the product (2 times 4). A red arrow points from the 7 in the quotient to the 14 in the product (2 times 7). The 14 is written below the 94, and the 14 is written below the 14. The 14 is written in red.

Step 3 in Long Division



Sister

3. Subtract

- Draw a line under the bottom 14.
- Draw a subtraction sign.
- Subtract & place answer under the line.

$$\begin{array}{r} 47 \\ 2 \overline{) 947} \\ \underline{-8} \downarrow \\ 14 \\ \underline{-14} \\ 0 \end{array}$$

Step 4 in Long Division



Brother 4. Bring down

- Put an arrow under the next number, 7, in the dividend.
- Bring the 7 down next to the 0.

$$\begin{array}{r} 47 \\ 2 \overline{) 947} \\ \underline{-8} \downarrow \\ 14 \\ \underline{-14} \\ 07 \end{array}$$

Step 5 in Long Division



Rover

5. Repeat or Remainder

- If the 2 will divide into your new number, 7, then repeat the steps of division.

$$\begin{array}{r} 47 \\ 2 \overline{) 947} \\ \underline{-8} \downarrow \\ 14 \downarrow \\ \underline{-14} \downarrow \\ 07 \end{array}$$

Step 1 in Long Division



Dad

1. Divide

- Divide your divisor, 2, into your new number, 7.
- Place your answer in the quotient next to the 7.

$$\begin{array}{r} 473 \\ 2 \overline{) 947} \\ \underline{-8} \\ 14 \\ \underline{-14} \\ 07 \end{array}$$

A red arrow points from the divisor '2' to the '7' in the remainder '07'.

Step 2 in Long Division



Mom

2. Multiply

- Multiply your divisor, 2, by your new number in the quotient, 3.
- Place your answer under the number you brought down, 7.

$$\begin{array}{r} 473 \\ 2 \overline{) 947} \\ \underline{-8} \\ 14 \\ \underline{-14} \\ 07 \\ 6 \end{array}$$

Step 3 in Long Division



Sister

3. Subtract

- Draw a line under the number 6.
- Place your subtraction sign.
- Subtract & put your answer directly under the 6.

$$\begin{array}{r} 473 \\ 2 \overline{) 947} \\ \underline{-8} \\ 14 \\ \underline{-14} \\ 07 \\ \underline{-6} \\ 1 \end{array}$$

Step 4 in Long Division



4. Bring down

Brother

- Look at your dividend to see if there are any more numbers to bring down.
- If not, move to step 5.

$$\begin{array}{r} 473 \\ 2 \overline{) 947} \\ \underline{-8} \\ 14 \\ \underline{-14} \\ 07 \\ \underline{-6} \\ 1 \end{array}$$

Step 5 in Long Division



Rover

5. Repeat or Remainder

- Since there are no more numbers to bring down & 2 will not divide into 1, you do not repeat the steps of division.
- The number left over, 1, becomes the remainder.

$$\begin{array}{r} 473 \text{ R1} \\ 2 \overline{) 947} \\ \underline{-8} \\ 14 \\ \underline{-14} \\ 07 \\ \underline{-6} \\ 1 \end{array}$$

You did it!



You're so smart!



$$\begin{array}{r} 473 \text{ R1} \\ 2 \overline{) 947} \\ \underline{-8} \\ 14 \\ \underline{-14} \\ 07 \\ \underline{-6} \\ 1 \end{array}$$

You're awesome!



Cool Dude!



Wolf!



Credits

Written by Monica Yuskaitis

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