Long Division

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

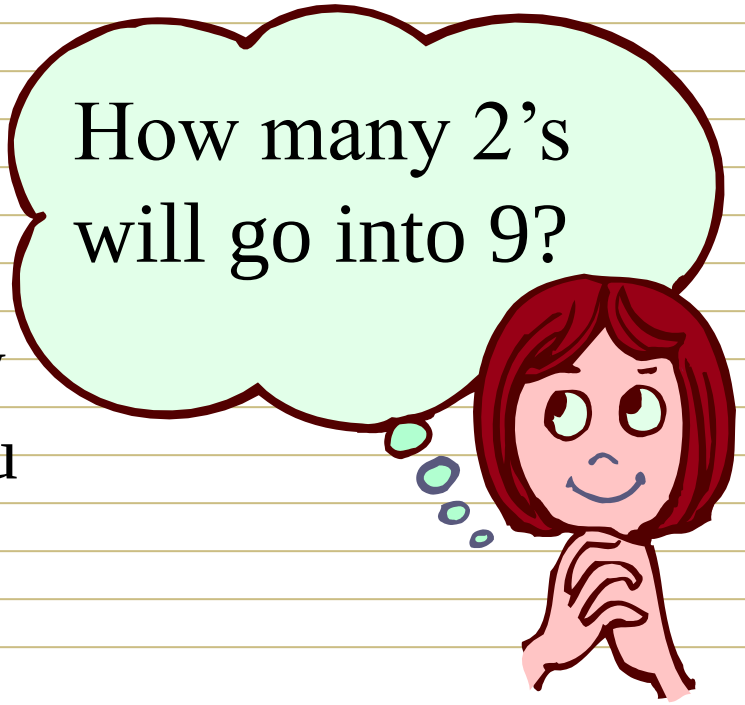
Step 1 in Long Division

Dad

1. Divide

$$2\overline{)947}$$ (4 above the 9)

- 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.



Step 2 in Long Division

Mom

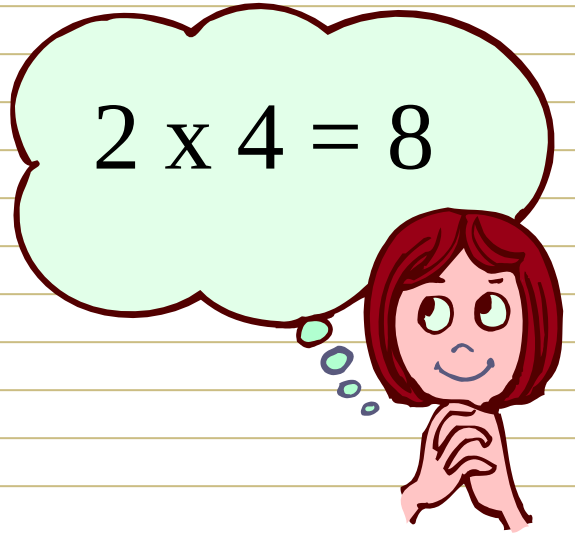
2. Multiply

$$2\overline{)947}$$

4

8

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



Step 3 in Long Division

3. Subtract

Sister

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

- 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.

Step 4 in Long Division

4. Bring down

Brother

$$\begin{array}{r} 4 \\ 2\overline{)\,9\,4\,7} \\ -8 \\ \hline 1\,4 \end{array}$$

- 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.

Step 5 in Long Division

Rover

5. Repeat or Remainder

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

- 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.

Step 1 in Long Division

Dad

1. Divide

$$\begin{array}{r} 4\,7 \\ 2\overline{)\,9\,4\,7} \\ -\,8\downarrow \\ \hline 1\,4 \end{array}$$

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

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.

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

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.

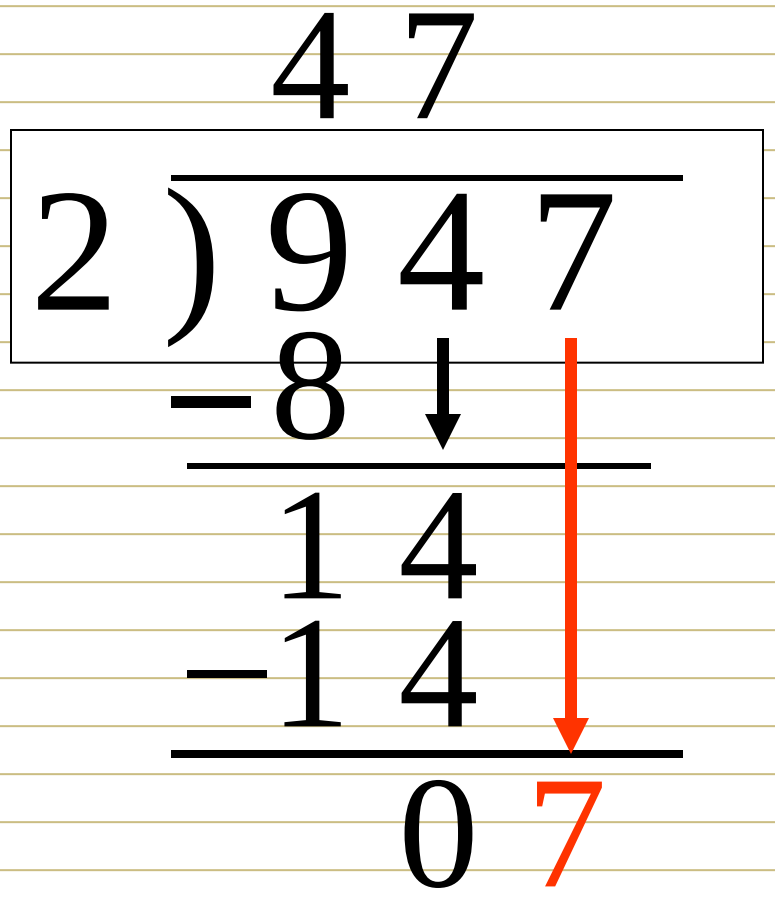
$$\begin{array}{r} 47 \\ 2\overline{)947} \\ -8\downarrow \\ \hline 14 \\ -14 \\ \hline 0 \end{array}$$

Step 4 in Long Division

4. Bring down

Brother

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



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.

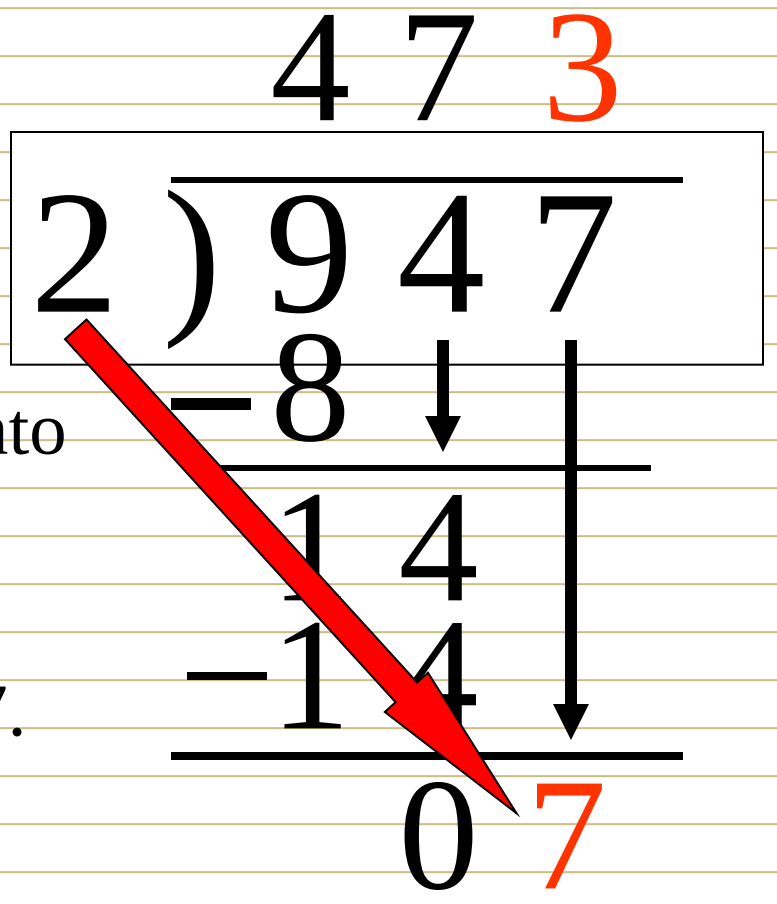
$$
\begin{array}{r}
47 \\
2\overline{)947} \\
-8\downarrow \\
\hline
14 \\
-14 \\
\hline
07
\end{array}
$$

Step 1 in Long Division

1. Divide

Dad

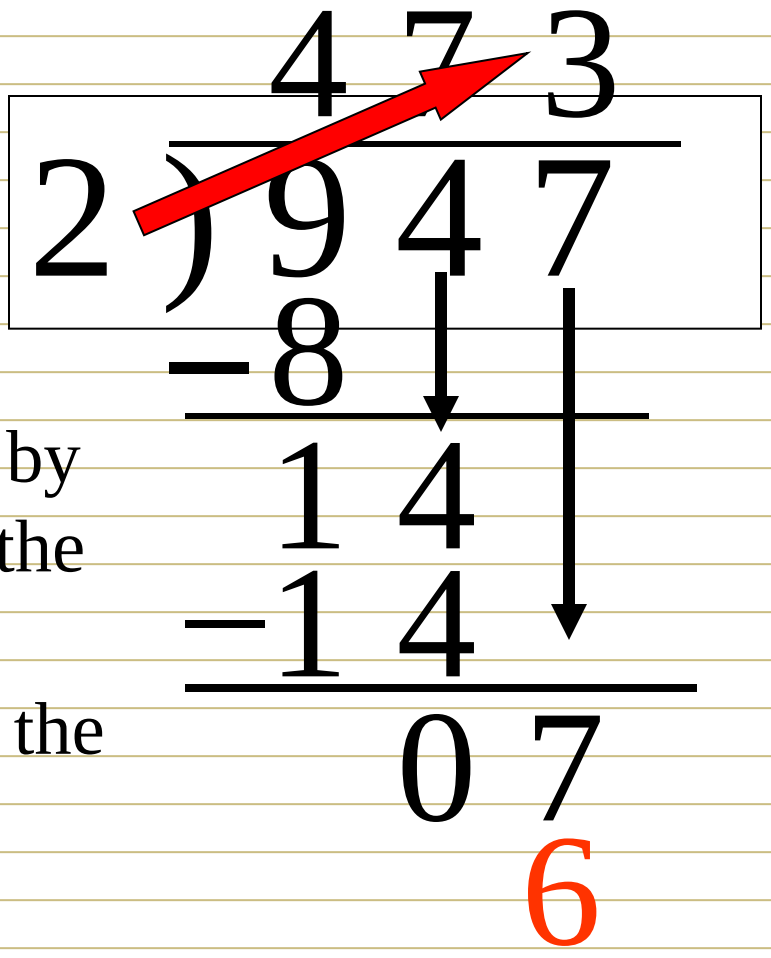
- Divide your divisor, 2, into your new number, 7.
- Place your answer in the quotient next to the 7.



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.

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.

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

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.

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

Step 5 in Long Division

Rover

5. Repeat or Remainder

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

- 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.

You did it!

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

You're awesome!

Cool Dude!

You're so smart!

Woof!