Long Division

◆ **Let this family help you remember the steps in long division.**

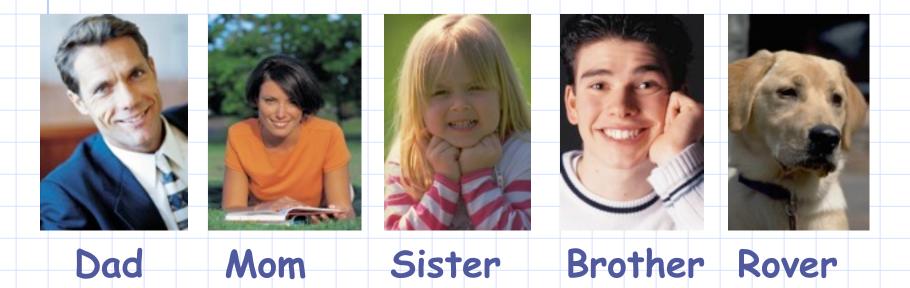**Dad   Mom   Sister   Brother   Rover**

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Long Division

◆ **Each family member represents a step in solving long division problems.**

Dad **Mom** **Sister** **Brother** **Rover**

Tuesday, February 28, 2012

Division- what is it?

35

***** *****

***** *****

***** *****

*****

Long Division- what is it?

Quotient

Answer

165 r2

Divisor

Number doing the dividing.

3) 497

Dividend

Number being divided

Step One - Divide

◆ Divide 3 into the first number in the dividend.

◆ 3 will go into 4 one time.

◆ Write a 1 above the 4 because that's the current dividend.

$$3 \overline{)\ 497} \quad \begin{array}{c} 1 \end{array}$$

Dad

Step Two - Multiply

◆ Multiply the divisor times the first number in the quotient.

◆ Write the answer below the number you just divided into.

Mom

$$3 \overline{)497} \quad 1$$
$$3$$

Step Three - Subtract

◆ Subtract.

◆ Be sure to line up your numbers carefully.

Sister

$$
\begin{array}{r}
1 \\
3\,\overline{)\,497} \\
-3 \\
\hline
1
\end{array}
$$

Step Four - Bring Down

◆ Draw an arrow and bring the second digit in the dividend down.

Brother

$$
\begin{array}{r}
1 \\
3{\overline{)\,497}} \\
-\,3 \\
\hline
19
\end{array}
$$

Step Five – Repeat or Remainder

◆ Repeat the steps in the same manner as before, as shown in the next set of slides.

Rover

$$
\begin{array}{r}
1 \\
3)\overline{497} \\
-\,3 \\
\hline
19
\end{array}
$$

Repeat Step One - Divide

- Divide 3 into the new number.
- 3 will go into 19 six times.
- Write a 6 above the 9 because that's the current dividend.

Dad

$$
\begin{array}{r}
16 \\
3\overline{)497} \\
-3 \\
\hline
-19
\end{array}
$$

10

Repeat Step Two - Multiply

◆ Multiply the divisor into the new number in your quotient.

◆ 3 x 6 = 18

◆ Write 18 below the number you just divided into.

Mom

$$
\begin{array}{r}
16 \\
3\overline{)497} \\
-3 \\
\hline
19 \\
18 \\
\end{array}
$$

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Repeat Step Three

Sister

$$
\begin{array}{r}
16 \\
3\,)\,\overline{497} \\
-3\downarrow \\
\hline
19 \\
-18 \\
\hline
1
\end{array}
$$

Repeat Step Four – Bring Down

◆ If there are more digits in the dividend, repeat the procedure.

◆ Bring the third digit in the dividend down.
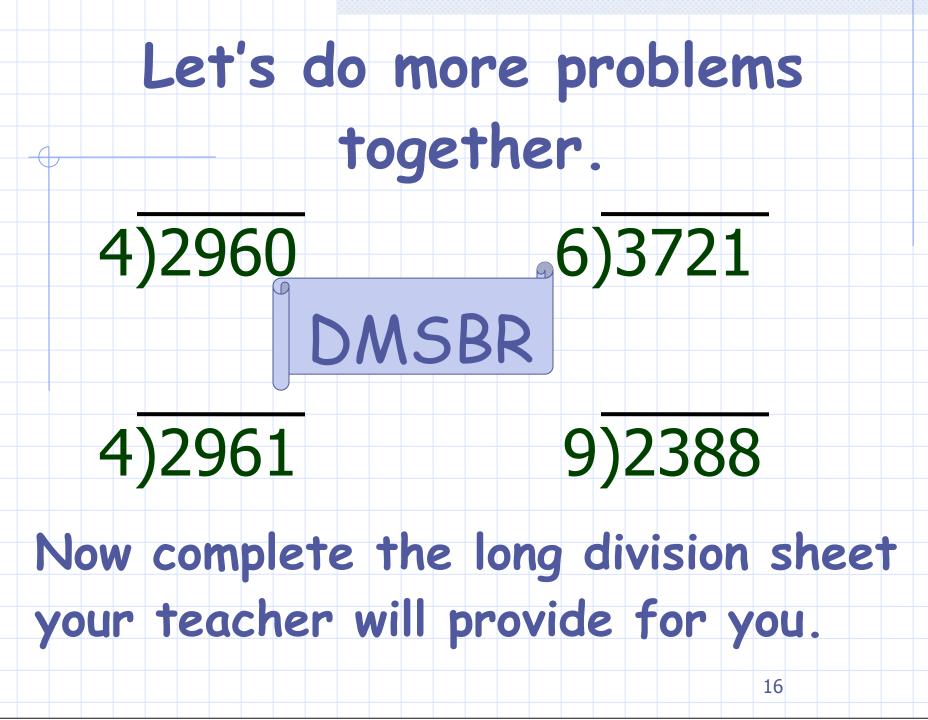
Brother

$$
\begin{array}{r}
16 \\
3{\overline{)\,497}} \\
-3 \\
\hline
19 \\
-18 \\
\hline
17 \\
\end{array}
$$

Repeat Step Five – Repeat or Remainder

- If there are more digits in the dividend, repeat the procedure.

- If there are no more digits in the dividend, write the final subtraction answer as a remainder.

- If there is no remainder, you're finished! Pat yourself on the back for a job well done.

Rover

$$
\begin{array}{r}
165 \text{ r}2 \\
3\overline{)497} \\
-3 \\
\hline
19 \\
-18 \\
\hline
17 \\
-15 \\
\hline
2
\end{array}
$$

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Remember...

Divide

Multiply

Subtract

Bring Down

Repeat or **R**emainder

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Let's do more problems together.

$$4\overline{)2960}$$ $$6\overline{)3721}$$

DMSBR

$$4\overline{)2961}$$ $$9\overline{)2388}$$

Now complete the long division sheet your teacher will provide for you.

- You have just learned a mnemonic device for helping you to remember the steps in long division.
- You can use mnemonic devices anytime you need to learn material in any subject.
- Let's look at some more examples of mnemonic devices…

◆ Do the clocks go forward or backward?

http://www.happychild.org.uk/acc/tpr/mne/0898clks.htm

◆ Numerical Prefixes

http://www.happychild.org.uk/acc/tpr/mne/0399pref.htm

◆ Embarrass or Embarass?

http://www.happychild.org.uk/acc/tpr/mne/0999emba.htm

◆ Stalactites and Stalagmites

http://www.happychild.org.uk/acc/tpr/mne/0105stal.htm

◆ Planet Sizes

http://www.happychild.org.uk/acc/tpr/mne/0102plan.htm

It's Your Turn!

◆ In groups of three, devise a mnemonic device that will help you and your classmates remember a math concept. Write a poem, song, story, or acronym such as "DMSBR" to help you.

◆ Some of the topics you might choose from include:

◆ Order of operations

◆ Solving word problems

◆ Components of an angle

◆ Finding perimeter and area

◆ Converting metric units

◆ Place value

◆ Prime factorization

◆ Finding mean, median, range, and mode

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