Notes and Examples

Long Division - Decimals

Math 6

Period _____

Don't forget...DMSB.

Ducks Must Swim Backwards
Down

D ivide into…?

M ultiply

S ubtract

B ring

Quotient

Divisor | Dividend
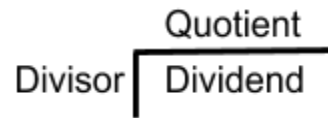
Dividing Decimal Numbers……

COMPARE and CONTRAST

What's the Same?	What's Different?
We follow the same _____.	We need to make sure the _____ is whole. (x by 10's to move the point)
We can _____ the answer to help us.	We need to move the decimal _____ straight up in the quotient.
We need to be _____ with our work to avoid possible mistakes.	We need to _____ _____ after the decimal point in the dividend until it… ➡ _____ ➡ _____ or can be ➡ _____

Think about these problems…
…what are the answers?

10 ÷ 5   100 ÷ 50   1000 ÷ 500

You can multiply **BOTH** numbers in a division problem by _____ and still get the same answer!

Notes and Examples
Long Division - Decimals

Ex 1.

Is the divisor whole? Y / N ?

If so….multiply by tens to move both of the points

Then, move the point straight up from wherever it is.

Ex 2.

Is the divisor whole? Y / N ?

If so….multiply by tens to move both of the points

Then, move the point straight up from wherever it is.

Now, follow the normal steps for LONG DIVISION. Don't forget **D M S B!**

$$4.68 \div 2$$

$$2\overline{)4.6\ 8}$$

$$4.85 \div 0.5$$

$$.5\overline{)4.8\ 5}$$

This division problem…

Terminates / Repeats / Continues on…

This division problem…

Terminates / Repeats / Continues on…

Notes and Examples

I needed to annex zeros.   Y / N

Ex 3.
Is the divisor whole? Y / N ?

If so….multiply by tens to move
both of the points

Then, move the point straight up
from wherever it is.

I needed to annex zeros.   Y / N

Ex 4.
Is the divisor whole? Y / N ?

If so….multiply by tens to move
both of the points

Then, move the point straight up
from wherever it is.

Now, follow the normal steps for LONG DIVISION. Don't forget   **D M S**
B!

$$8.34 \div .03$$

$$75.175 \div 0.4$$

This division problem…

Terminates / Repeats / Continues on…
needs rounding

This division problem…

Terminates / Repeats / Continues on…
needs rounding

Notes and Examples
Long Division - Decimals

I needed to annex zeros.   Y / N   I needed to annex zeros.   Y / N

Don't forget to beware of "double bringdowns" when your divisor **DOES NOT** go into a number formed **after** you bring down. If this happens, put a zero in your quotient and either bring down the next number or annex a zero. Continue until the quotient terminates, repeats, or passes the place you are rounding to. (typically the thousandths)

Ex 5.
Is the divisor whole? Y / N ?

$$70.4 \div 6.6$$

Ex 6.
Is the divisor whole? Y / N ?

$$82.814 \div 2.4$$

This division problem…   This division problem…

Terminates / Repeats / Continues on…   Terminates / Repeats / Continues on…
          needs rounding   needs rounding

I needed to annex zeros.   Y / N   I needed to annex zeros.   Y / N

I had a double bring down   Y / N   I had a double bring down   Y / N
and needed to place a   and needed to place a

Notes and Examples

Long Division - Decimals

Ex 7.   **Ex 8.**
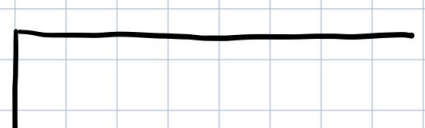
$$66.015 \div 13$$ $$43.2 \div 1.1$$

This division problem…   This division problem…

Terminates / Repeats / Continues on…   Terminates / Repeats / Continues on…
                needs rounding   needs rounding
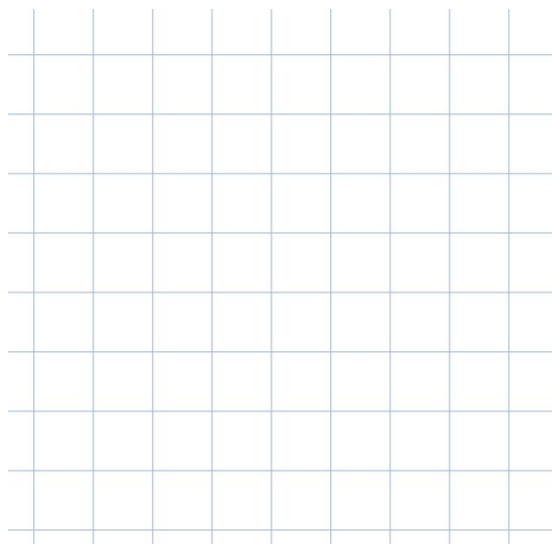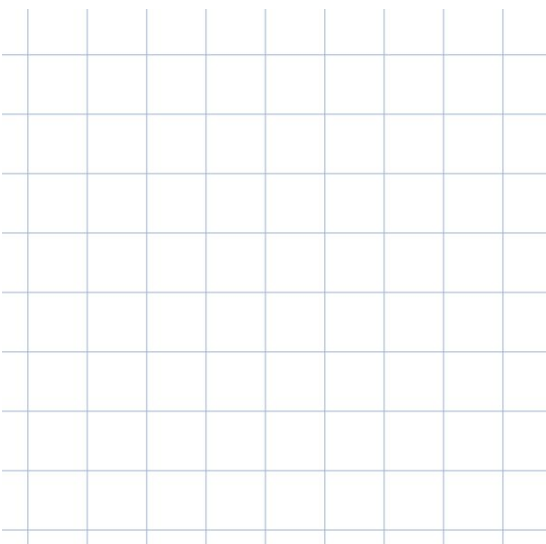
I needed to annex zeros.   Y / N   I needed to annex zeros.   Y / N

I had a double bring down   Y / N   I had a double bring down   Y / N
and needed to place a   and needed to place a
zero in my quotient   zero in my quotient

More Practice Space:

5

Long Division - Decimals