

Name _____

Unit 2 Study Guide

<p>What does a decimal represent?</p> <p>anything behind the decimal point represents part of a whole</p>			
<p>Comparing and Ordering Decimals</p> <p>The key thing to remember when comparing decimals is to make sure you compare the same place between numbers. Be sure to compare the ones to the ones, the tenths to the tenths, etc.</p>	<p>Comparing:</p> $3.114 < 3.14$ $4.28 > 4.23$		
	<p>Ordering numbers from least to greatest</p> <p>5.15, 4.95, 5.3, 5.115, 5.11</p> <p>4.95, 5.11, 5.115, 5.15, 5.3</p>		
<p>Adding and Subtracting:</p> <ol style="list-style-type: none"> Line up the decimal points Add zeroes if needed Bring the decimal into the answer Add or subtract as normal 	<p>Adding:</p> <table border="1"> <tr> <td> $3.16 + 2.3$ $\begin{array}{r} 3.16 \\ +2.30 \\ \hline 5.46 \end{array}$ </td> <td> $2.048 + 0.155$ $\begin{array}{r} 2.048 \\ +0.155 \\ \hline 2.203 \end{array}$ </td> </tr> </table>	$3.16 + 2.3$ $\begin{array}{r} 3.16 \\ +2.30 \\ \hline 5.46 \end{array}$	$2.048 + 0.155$ $\begin{array}{r} 2.048 \\ +0.155 \\ \hline 2.203 \end{array}$
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<p>Subtracting:</p> <table border="1"> <tr> <td> $2.75 - 1.36$ $\begin{array}{r} 2.75 \\ -1.36 \\ \hline 2.39 \end{array}$ </td> <td> $8 - 1.75$ $\begin{array}{r} 8.00 \\ -1.75 \\ \hline 6.25 \end{array}$ </td> </tr> </table>	$2.75 - 1.36$ $\begin{array}{r} 2.75 \\ -1.36 \\ \hline 2.39 \end{array}$	$8 - 1.75$ $\begin{array}{r} 8.00 \\ -1.75 \\ \hline 6.25 \end{array}$	
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<p>Multiplying Decimals:</p> <ol style="list-style-type: none"> Line the numbers to the right Ignore the decimals and multiply Count the number of digits past the decimal in the original problem. Move that many places from the right in the answer and put your decimal point. 	<p>Multiply:</p> <table border="1"> <tr> <td> 2.5×3 </td> <td> 4.75×1.7 </td> </tr> </table>	2.5×3	4.75×1.7
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<p>What is a factor? numbers you multiply to get another worded differently, a number that will evenly divide into a larger number</p>	<p>List the factors of:</p> <p>12: 1, 2, 3, 4, 6, 12</p> <p>60: 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60</p>
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<p>What is a multiple? a set of numbers that can all be evenly divided by the same number skip counting by a number</p>	<p>List 5 multiples of:</p> <p>8: 8, 16, 24, 32, 40, 48, 64, ...</p> <p>15: 15, 30, 45, 60, 75, 90, ...</p>
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Rules of Divisibility	#	Rule:	Examples:
	2	ends in an even number	42, 128, 1056
	3	add the digits, if sum is divisible by 3, so is the number	123, 642, 1236
	4	last two digits divisible by 4	516, 744, 1076
	5	ends in 5 or 0	55, 920, 2235
	6	divisible by 2 and 3	546, 726, 1602
	9	add the digits, if sum is divisible by 9, so is the number	540, 936, 1503
	10	ends in an even number	42, 128, 1056

Dividing Decimals – Draw a quick picture representing the frog and the dog.



Dividing Decimals -

Move the decimal to make the divisor the whole number

The frog taunting the dog.

Move the decimal in the dividend the same number of spaces

The jumping away scared.

Jump the decimal into the quotient

The dog jumping through the roof.

Divide as you would multidigit numbers

Examples:

$$16.8 \div 1.35$$

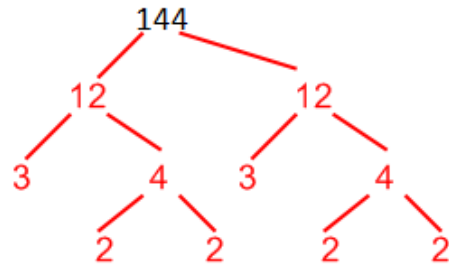
$$\begin{array}{r}
 12.\overline{4} \\
 1.35 \overline{) 16.80.0} \\
 \underline{-135} \\
 330 \\
 \underline{-270} \\
 600 \\
 \underline{-540} \\
 60
 \end{array}$$

The line over the number represents a repeating decimal.

Prime Factorization

tells us the prime numbers you would multiply together to get a certain number

Factor Tree:



Greatest Common Factor

the largest factor that will go into a set of numbers

What is the GCF of 40, 8, and 24?

$$\begin{array}{r}
 4 \overline{) 8 \quad 24 \quad 40} \\
 \underline{x 2} \quad \underline{2 \quad 6 \quad 10} \\
 \textcircled{8} \quad 1 \quad 3 \quad 5
 \end{array}$$

Least Common Multiple

smallest number that a set of numbers can evenly divide into

if there are three numbers, find the LCM for the two smallest, and then find the LCM for that number and the larger one

What is the LCM of 8, 20, and 14?

$$\begin{array}{r}
 2 \overline{) 8 \quad 14 \quad 20} \\
 \overline{+ 4 \quad x \quad 7} \\
 2 \overline{) 56 \quad 20} \\
 \underline{x 2} \quad \underline{28 \quad 10} \\
 4x14 \quad x \quad 5 \quad \textcircled{= 280}
 \end{array}$$

My student spent at least 30 minutes studying this study guide.

Parent Signature _____ Date _____