

**6<sup>th</sup> Grade**  
**Intensive Math**  
**Summer Assignments**

*I am excited that you accepted the challenge that intensive math offers. There will be no review at the beginning of the school year. This packet serves as a review of 5<sup>th</sup> grade skills. By completing it carefully, you will be ready for a successful year in 6<sup>th</sup> grade intensive math.*

This review must be completed, in entirety, by the first day of school. There will be NO EXCEPTIONS. Please be prepared for a quiz over these skills.

Complete the assignments slowly throughout the summer. Do 3 pages (front and back) per month.

All work must be shown. Please be neat and organized!

All fractions must be simplified.

When dividing whole numbers, remainders should be written in simplest fraction form.

Measurements must be labeled using the appropriate units for perimeter, area, and volume.

The following supplies will be needed for math class: Mead Five Star 100-page composition book with plastic cover, wide-ruled notebook paper, pencils, red pens, colored pencils, yellow highlighters, 3 jumbo glue sticks, and flexible ruler.

*If you have any questions, please e-mail me at [lbiediger@g-pisd.org](mailto:lbiediger@g-pisd.org). I will respond to your questions as quickly as possible.*

*Have a great summer! I look forward to meeting each of you in August!*

*Mrs. Biediger*

**Name** \_\_\_\_\_

Place Value

Write the standard decimal form.	Compare. Use >, <, or =.	List in order from least to greatest.
<p><i>thirteen thousandths</i></p> <div style="border: 1px solid black; height: 30px; width: 200px; margin: 10px auto;"></div>	<p>382.05 _____ 382.047</p>	<p>459.01    459.13    459.067</p> <div style="border: 1px solid black; height: 30px; width: 200px; margin: 10px auto;"></div>
<p><i>nine hundred four and three hundredths</i></p> <div style="border: 1px solid black; height: 30px; width: 200px; margin: 10px auto;"></div>	<p>0.984 _____ 0.99</p>	<p>0.3    0.028    0.03    0.17</p> <div style="border: 1px solid black; height: 30px; width: 200px; margin: 10px auto;"></div>

Operations

<p>946.2 - 95.87</p> <div style="border: 1px solid black; height: 30px; width: 200px; margin: 10px auto;"></div>	<p>3.02 x 89</p> <div style="border: 1px solid black; height: 30px; width: 200px; margin: 10px auto;"></div>	<p>421.6 ÷ 17</p> <div style="border: 1px solid black; height: 30px; width: 200px; margin: 10px auto;"></div>
<p><math>\frac{3}{8} + \frac{3}{4}</math></p> <div style="border: 1px solid black; height: 30px; width: 200px; margin: 10px auto;"></div>	<p><math>3\frac{2}{3} - 1\frac{1}{4}</math></p> <div style="border: 1px solid black; height: 30px; width: 200px; margin: 10px auto;"></div>	<p><math>4(\frac{7}{8})</math></p> <div style="border: 1px solid black; height: 30px; width: 200px; margin: 10px auto;"></div>

## Primes, Factors, & Multiples

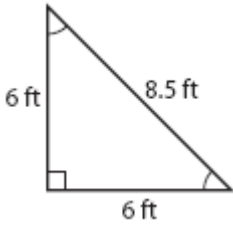
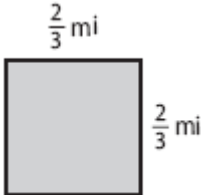
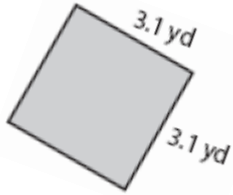
<p>List the prime numbers between 1 and 30.</p> <div data-bbox="201 348 561 520" style="border: 1px solid black; height: 80px; width: 100%;"></div>	<p>Make 2 T-charts. Find all of the factors of 24 and 42. Then find the Greatest Common Factor (GCF).</p> <div data-bbox="621 457 982 533" style="border: 1px solid black; height: 30px; width: 100%;"></div>	<p>Find the Least Common Multiple (LCM) of 12 and 8.</p> <div data-bbox="1032 457 1393 533" style="border: 1px solid black; height: 30px; width: 100%;"></div>
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## Order of Operations (GEMDAS)

(Grouping Symbols, Exponents, Multiplication & Division *left to right*, Addition & Subtraction *left to right*)

$42 - (24 \div 3) \cdot 2$ <div data-bbox="209 1142 570 1218" style="border: 1px solid black; height: 30px; width: 100%;"></div>	$(23 - 8) + 6 \cdot 2$ <div data-bbox="626 1142 987 1218" style="border: 1px solid black; height: 30px; width: 100%;"></div>	$\frac{7(15 + 9)}{2 \cdot 6}$ <div data-bbox="1029 1142 1390 1218" style="border: 1px solid black; height: 30px; width: 100%;"></div>
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## Measurement

<p>Find the perimeter.</p> <div data-bbox="277 1444 508 1667"></div> <div data-bbox="209 1885 570 1961" style="border: 1px solid black; height: 30px; width: 100%;"></div>	<p>Find the perimeter. <math>P=4s</math></p> <div data-bbox="708 1440 906 1633"></div> <div data-bbox="626 1885 987 1961" style="border: 1px solid black; height: 30px; width: 100%;"></div>	<p>Find the area. <math>A=s \cdot s</math></p> <div data-bbox="1094 1432 1325 1625"></div> <div data-bbox="1029 1885 1390 1961" style="border: 1px solid black; height: 30px; width: 100%;"></div>
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Comparing & Ordering Fractions

Compare using the Least Common Denominator (LCD). Use >, <, or =.	Compare using the Least Common Denominator (LCD). Use >, <, or =.	Compare using the Least Common Denominator (LCD). Use >, <, or =.
$\frac{4}{5} \quad \text{_____} \quad \frac{9}{10}$	$\frac{9}{16} \quad \text{_____} \quad \frac{2}{3}$	$\frac{9}{25} \quad \text{_____} \quad \frac{41}{100}$

Operations

$46 - 15.8$          <input data-bbox="207 1260 570 1333" type="text"/>	$0.2 \times 0.3$          <input data-bbox="625 1260 987 1333" type="text"/>	$547.8 \times 24$          <input data-bbox="1042 1260 1404 1333" type="text"/>
$5127 \div 16$          <input data-bbox="207 1854 570 1927" type="text"/>	$6\frac{1}{4} - 2\frac{5}{8}$          <input data-bbox="625 1854 987 1927" type="text"/>	$7 - 4\frac{3}{8}$          <input data-bbox="1042 1854 1404 1927" type="text"/>

## Operations

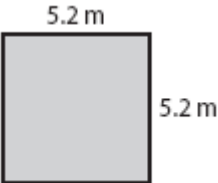

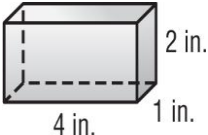
$4 \div \frac{1}{3}$	$\frac{3}{4} \bullet 12$	$\frac{1}{2} \div 3$
<input type="text"/>	<input type="text"/>	<input type="text"/>

## Order of Operations (GEMDAS)

(**G**rouping Symbols, **E**xponents, **M**ultiplication & **D**ivision *left to right*, **A**ddition & **S**ubtraction *left to right*)

$\frac{54 - (3 \bullet 8) \div 4}{6}$	$6(12) + 2(17) - 5$	$\frac{8.7 \bullet 9 + 11.7}{15}$
<input type="text"/>	<input type="text"/>	<input type="text"/>

## Measurement

Find the area. 	Find the area. 	Find the volume. 
<input type="text"/>	<input type="text"/>	<input type="text"/>

Comparing & Ordering Fractions & Decimals

Change each fraction to a common denominator. Then order the original fractions from least to greatest.	Change each fraction to a common denominator. Then order the original fractions from greatest to least.	Write in decreasing order.
$\frac{2}{3}, \frac{7}{12}, \frac{3}{4}$     <input data-bbox="212 655 573 730" type="text"/>	$\frac{7}{10}, \frac{5}{6}, \frac{2}{3}$     <input data-bbox="630 655 990 730" type="text"/>	$1.003 \quad 0.97 \quad 1.1 \quad 1.02$     <input data-bbox="1047 655 1408 730" type="text"/>

Operations

$4.67 + 15.8 + 9$     <input data-bbox="220 1325 581 1400" type="text"/>	$6.2 \times 0.37$     <input data-bbox="631 1325 992 1400" type="text"/>	$85.26 \div 14$     <input data-bbox="1049 1325 1409 1400" type="text"/>
$6\left(\frac{3}{4}\right)$     <input data-bbox="220 1900 581 1976" type="text"/>	$3\frac{5}{8} + 4\frac{3}{4}$     <input data-bbox="631 1900 992 1976" type="text"/>	$6\frac{1}{4} - 1\frac{3}{8}$     <input data-bbox="1049 1900 1409 1976" type="text"/>

### Order of Operations (GEMDAS)

(Grouping Symbols, Exponents, Multiplication & Division *left to right*, Addition & Subtraction *left to right*)

$\frac{[12 - (2 \cdot 4) + 9]}{7 + 6}$	$(3 \cdot 1\frac{1}{2}) + \frac{5}{8}$	$12 - (4 \cdot 2\frac{1}{8})$
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>

### Fraction & Decimal Relationships

EX: $1/5 = 2/10 = 0.2$	$2/5 = \underline{\quad}/10 = 0.\underline{\quad}$	$3/5 = \underline{\quad}/10 = 0.\underline{\quad}$
$4/5 = \underline{\quad}/10 = 0.\underline{\quad}$	$5/5 = \underline{\quad}/10 = \underline{\quad}.0$	$6/5 = \underline{\quad}/10 = \underline{\quad}.\underline{\quad}$

### Primes, Factors, & Multiples

<p>List the prime numbers between 30 and 50. <i>You must memorize all of the primes between 1 and 50!</i></p>	<p>Make 2 T-charts. List all of the factors of 32 and 48. Then circle the GCF.</p>	<p>Find the LCM of 9 and 15.</p> <div style="text-align: center; margin-top: 100px;"> <input style="width: 100%; height: 20px;" type="text"/> </div>
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### Divisibility

<p>Circle the numbers that are divisible by 3.</p> <p style="text-align: center;">51   89   124   210</p> <p style="text-align: center;">48   97   156   403</p>	<p>Circle the numbers that are divisible by 4.</p> <p style="text-align: center;">56   88   93   100</p> <p style="text-align: center;">126   132   212   518</p>	<p>Circle the numbers that are divisible by 9.</p> <p style="text-align: center;">57   93   126   198</p> <p style="text-align: center;">245   297   354   504</p>
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Operations

<p style="text-align: center;"><math>0.059 \times 8</math></p> <div style="border: 1px solid black; width: 200px; height: 20px; margin-left: auto; margin-right: auto;"></div>	<p style="text-align: center;"><math>6.88 \times 17</math></p> <div style="border: 1px solid black; width: 200px; height: 20px; margin-left: auto; margin-right: auto;"></div>	<p style="text-align: center;"><math>1330.32 \div 23</math></p> <div style="border: 1px solid black; width: 200px; height: 20px; margin-left: auto; margin-right: auto;"></div>
<p style="text-align: center;"><math>\frac{4156}{14}</math></p> <div style="border: 1px solid black; width: 200px; height: 20px; margin-left: auto; margin-right: auto;"></div>	<p style="text-align: center;"><math>\frac{1}{3} \div 2</math></p> <div style="border: 1px solid black; width: 200px; height: 20px; margin-left: auto; margin-right: auto;"></div>	<p style="text-align: center;"><math>\frac{5}{9}(6)</math></p> <div style="border: 1px solid black; width: 200px; height: 20px; margin-left: auto; margin-right: auto;"></div>

**Algebraic Expressions:** Write an expression, using  $n$  to represent the unknown quantity.

<p><i>the sum of nine and a number</i></p>	<p><i>the product of six and a number</i></p>	<p><i>four less than a number</i></p>
<p><i>twelve more than a number</i></p>	<p><i>the price of a pizza less a \$2 coupon</i></p>	<p><i>thirteen degrees warmer than yesterday's temperature</i></p>

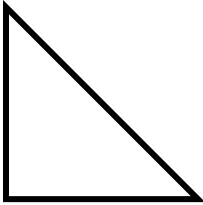




### Order of Operations (GEMDAS)

(Grouping Symbols, Exponents, **M**ultiplication & **D**ivision *left to right*, **A**ddition & **S**ubtraction *left to right*)

$\frac{72 - [6 + (2 \cdot 9)]}{3}$	$14 - (2\frac{3}{4} + 5\frac{1}{2})$	$8 + 3(9) - 19 + 7$
<input type="text"/>	<input type="text"/>	<input type="text"/>

### Geometry

		
___ acute angles	___ acute angles	___ acute angles
___ obtuse angles	___ obtuse angles	___ obtuse angles
___ right angles	___ right angles	___ right angles
___ pair(s) of parallel sides	___ pair(s) of congruent sides	___ pair(s) congruent sides
___ congruent sides	___ pair(s) of parallel sides	___ pair(s) of parallel sides
___ pair(s) of perpendicular sides	___ pair(s) of perpendicular sides	___ pair(s) of perpendicular sides
Name of polygon: <input type="text"/>	Name of polygon: <input type="text"/>	Name of polygon: <input type="text"/>

### Fraction & Decimal Relationships

$1/4 = \underline{\quad}/100 = 0.\underline{\quad}$	$1/2 = \underline{\quad}/10 = 0.\underline{\quad}$	$3/4 = \underline{\quad}/100 = 0.\underline{\quad}$
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Operations

$92.69 \div 23$       <input style="width: 200px; height: 25px;" type="text"/>	$(9.8)(0.17)$       <input style="width: 200px; height: 25px;" type="text"/>	$1491 - 23.62$       <input style="width: 200px; height: 25px;" type="text"/>
$8746 \div 24$       <input style="width: 200px; height: 25px;" type="text"/>	$8 - 4\frac{5}{8}$       <input style="width: 200px; height: 25px;" type="text"/>	$\frac{2}{3} + \frac{7}{8} + \frac{5}{12}$       <input style="width: 200px; height: 25px;" type="text"/>

Fraction & Decimal Relationships

$1/20 = \underline{\hspace{1cm}}/100 = 0.\underline{\hspace{1cm}}$	$3/25 = \underline{\hspace{1cm}}/100 = 0.\underline{\hspace{1cm}}$	$7/20 = \underline{\hspace{1cm}}/100 = 0.\underline{\hspace{1cm}}$
$11/25 = \underline{\hspace{1cm}}/100 = 0.\underline{\hspace{1cm}}$	$13/20 = \underline{\hspace{1cm}}/100 = 0.\underline{\hspace{1cm}}$	$23/25 = \underline{\hspace{1cm}}/100 = 0.\underline{\hspace{1cm}}$

### Order of Operations (GEMDAS)

(**G**rouping Symbols, **E**xponents, **M**ultiplication & **D**ivision *left to right*, **A**ddition & **S**ubtraction *left to right*)

$\frac{72 + [12 + (4 \cdot 9)]}{5}$	$14 - (2.25 + 5.4)$	$58 - 3(9) + 4(6)$
<input type="text"/>	<input type="text"/>	<input type="text"/>

### Primes, Factors, & Multiples

List the prime numbers between 50 and 75.	List all of the factors of 48 and 72 on T-charts. Then circle the GCF.	Find the LCM of 16 and 20. 16: 20:  <input type="text"/>
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### Customary Measurement Conversions

How many cups are in 3 quarts?	How many inches are in $5\frac{1}{4}$ feet?	How many ounces are in 7.25 pounds?
<input type="text"/>	<input type="text"/>	<input type="text"/>

Operations

$4 \div \frac{1}{5}$          <input data-bbox="217 737 576 810" type="text"/>	$\frac{1}{5} \div 4$          <input data-bbox="628 726 987 800" type="text"/>	$8 \cdot \frac{3}{4}$          <input data-bbox="1039 726 1398 800" type="text"/>
$7\frac{1}{4} - 3\frac{1}{2}$          <input data-bbox="224 1367 583 1440" type="text"/>	$8\frac{2}{3} + 4\frac{5}{8}$          <input data-bbox="628 1356 987 1430" type="text"/>	$(5.76)(12)$          <input data-bbox="1044 1356 1403 1430" type="text"/>

Place Value

Write the standard decimal form.	Compare. Use >, <, or =.	Write in increasing order.
forty-one and nineteen thousandths       <input data-bbox="217 1772 576 1845" type="text"/>	$30.050$ _____ $30.005$       <input data-bbox="628 1772 987 1845" type="text"/>	$0.01$ $0.007$ $0.2$ $0.106$       <input data-bbox="1039 1772 1398 1845" type="text"/>

### Order of Operations (GEMDAS)

(Grouping Symbols, Exponents, **M**ultiplication & **D**ivision *left to right*, **A**ddition & **S**ubtraction *left to right*)

$47 - 15 + (3 \bullet 12)$	$9\frac{3}{4} - (2\frac{1}{8} + 4\frac{1}{2})$	$56 \div 7 \times 4 + 9$
<input type="text"/>	<input type="text"/>	<input type="text"/>

### Customary Measurement Conversions

How many cups are equivalent to 44 fluid ounces?	How many feet are equivalent to 75 inches?	How many pounds are equal to 72 ounces?
<input type="text"/>	<input type="text"/>	<input type="text"/>


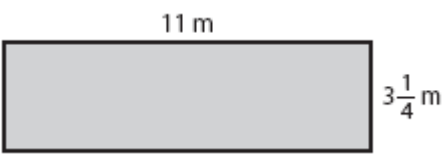
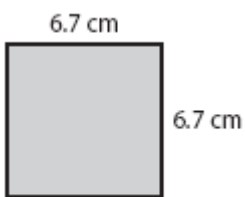
### Metric Measurement Conversions

How many milliliters are equivalent to 3 liters?	How many millimeters are equivalent to 6.5 centimeters?	How many grams are equivalent to 12 kilograms?
<input type="text"/>	<input type="text"/>	<input type="text"/>

Operations

$1.105 \div 13$     <input data-bbox="212 678 574 751" type="text"/>	$39.7 \bullet 8.4$     <input data-bbox="628 678 990 751" type="text"/>	$8\frac{1}{4} - 6\frac{5}{12}$     <input data-bbox="1044 678 1406 751" type="text"/>
$7\frac{1}{4} + 3\frac{1}{2} + 2\frac{2}{3}$     <input data-bbox="206 1220 568 1293" type="text"/>	$8\frac{2}{3} - 7\frac{3}{4}$     <input data-bbox="628 1220 990 1293" type="text"/>	$8 \div \frac{1}{3}$     <input data-bbox="1044 1220 1406 1293" type="text"/>

Measurement

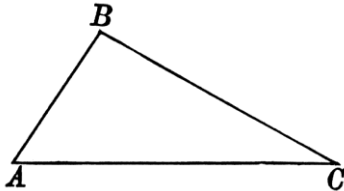
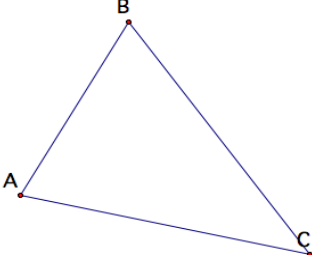
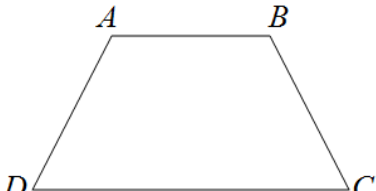
<p><b>Find the volume.</b></p>      <input data-bbox="212 1908 574 1982" type="text"/>	<p><b>Find the perimeter.</b></p>      <input data-bbox="638 1908 1000 1982" type="text"/>	<p><b>Find the area.</b></p>      <input data-bbox="1092 1908 1401 1982" type="text"/>
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### Order of Operations (GEMDAS)

(Grouping Symbols, Exponents, **M**ultiplication & **D**ivision *left to right*, **A**ddition & **S**ubtraction *left to right*)

$18 - 4 \div 2 + 5$	$4\frac{2}{3} + \frac{1}{2} \cdot 5$	$\frac{54 - 3 \cdot 9 + 5 \cdot 6}{19}$
<input type="text"/>	<input type="text"/>	<input type="text"/>

### Geometry

Name all the sides (line segments).	Name all the angles.	Name the parallel sides.
		
<input type="text"/>	<input type="text"/>	<input type="text"/>

### Fractions & Decimals

Write each decimal as a fraction in simplest form.	Convert each mixed number to an improper fraction and each improper fraction to a mixed number.	Convert to a common denominator. Then write in order from least to greatest.
$0.12 = \frac{12}{100} = \underline{\hspace{2cm}}$	$3\frac{2}{5} = \underline{\hspace{2cm}}$ $\frac{18}{4} = \underline{\hspace{2cm}}$	$\frac{7}{8}$ $\frac{5}{16}$ $\frac{1}{2}$ $\frac{2}{3}$
$0.125 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$	$5\frac{7}{12} = \underline{\hspace{2cm}}$ $\frac{16}{6} = \underline{\hspace{2cm}}$	
$0.08 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$	$6\frac{5}{8} = \underline{\hspace{2cm}}$ $\frac{74}{8} = \underline{\hspace{2cm}}$	
$0.064 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$		

## Operations

$347.87 \div 43$       <input data-bbox="227 724 584 798" type="text"/>	$9 \div \frac{1}{4}$       <input data-bbox="630 724 987 798" type="text"/>	$8.69 \times 1.2$       <input data-bbox="1040 724 1398 798" type="text"/>
$11\frac{3}{5} - 4\frac{0}{10}$       <input data-bbox="224 1360 581 1434" type="text"/>	$8\frac{4}{5} + 2\frac{5}{8}$       <input data-bbox="630 1360 987 1434" type="text"/>	$127 - 34.59$       <input data-bbox="1040 1360 1398 1434" type="text"/>

## Fraction &amp; Decimal Relationships

$9/30 = \underline{\quad}/10 = 0.\underline{\quad}$	$7/25 = \underline{\quad}/100 = 0.\underline{\quad}$	$19/20 = \underline{\quad}/100 = 0.\underline{\quad}$
$24/40 = \underline{\quad}/10 = 0.\underline{\quad}$	$37/50 = \underline{\quad}/100 = 0.\underline{\quad}$	$13/25 = \underline{\quad}/100 = 0.\underline{\quad}$



### Order of Operations (GEMDAS)

(Grouping Symbols, Exponents, **M**ultiplication & **D**ivision *left to right*, **A**ddition & **S**ubtraction *left to right*)

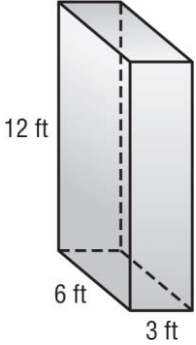
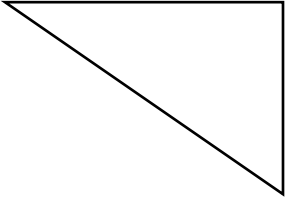
$\frac{49 - 3 \times 7 + 12}{5}$	$9\frac{3}{4} - 1\frac{1}{2} + 2\frac{1}{4}$	$\frac{28 \div 2 \times 3 + 6}{12}$
<input type="text"/>	<input type="text"/>	<input type="text"/>

### Customary Measurement Conversions

How many cups are equivalent to 92 ounces? Name all of the sides.	How many feet are equivalent to 90 inches?	How many pounds are equal to 100 ounces?
<input type="text"/>	<input type="text"/>	<input type="text"/>

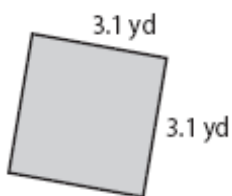
### Metric Measurement Conversions

How many milliliters are equivalent to 2.5 liters?	How many millimeters are equivalent to 8.5 centimeters?	How many grams are equivalent to 3.5 kilograms?
<input type="text"/>	<input type="text"/>	<input type="text"/>

<p>Convert each fraction to a common denominator. Then write the <u>original fractions</u> in order from least to greatest.</p> $\frac{2}{3} \quad \frac{1}{2} \quad \frac{7}{12} \quad \frac{3}{4}$  <input type="text"/>	<p>List the prime numbers between 1 and 50. <i>These must be memorized!</i></p>          <input type="text"/>	<p>How many cups are equivalent to <math>2\frac{1}{2}</math> quarts?</p>          <input type="text"/>
<p>Find the volume.</p>           <input type="text"/>	<p><math>51 - 4 + 6 \times 3</math></p>          <input type="text"/>	<p>Draw 2 T-charts. List all factors of 28 and 42. What is the greatest common factor?</p>          <input type="text"/>
$\frac{9}{25}$ $= \frac{\quad}{100}$ $= 0.\underline{\quad}$          <input type="text"/>	<p>Write in decreasing order.</p> <p>7.31, 7.4, 7.239, 7.3</p>          <input type="text"/>	<p>How many centimeters are equivalent to 400 millimeters?</p>          <input type="text"/>
$\frac{9}{10} + \frac{3}{5}$          <input type="text"/>	<p>Name the triangle based on sides and angles.</p>           <input type="text"/>	$\frac{1}{2} \div 6$          <input type="text"/>

$$332.8 \div 16$$

Find the area.



$$6\frac{3}{4} - (2\frac{1}{2} + 3\frac{1}{8})$$

Circle all of the numbers that are divisible by both 3 and 4.

84    120    136  
212    260    318  
324    408    432  
512    552    567

$$\frac{86 - (18 + 3 \times 4)}{7}$$

$$9.36 \bullet 2.7$$

$$53 - 29.6 + 8.7$$

$$6\frac{1}{3} - 2\frac{3}{4}$$

$$\frac{2}{3}(6) + 3\frac{1}{2}$$