

## Grade 5 Curriculum Overview

### Operations and Algebraic Thinking

- Evaluate expressions using parentheses and brackets.
- Interpret numerical expressions without solving them.
- Analyze and extend a number pattern and state the rule.
- Use the distributive property to solve an equation.
- Solve an equation that uses a letter to represent an unknown variable (e.g.,  $2 + n = 5$ ).
- Describe a numerical expression in words (e.g.  $4x + 3 = 3$  more than 4 times a number).

### Number and Operations in Base Ten

- Compare place value in multi-digit numbers.
- Write decimals in expanded form.
- Multiply and divide by powers of 10.
- Round whole numbers and decimals.
- Compare whole numbers and decimals using symbols for greater than, less than or equal to.
- Divide by up to a four-digit number by a two-digit number.
- Multiply by up to a three-digit number by a three-digit number.
- Apply all four functions to decimals to the hundredths place.
- Determine the place value of numbers up to 100 million.
- Order positive and negative numbers on a number line.
- Add with negative numbers.
- Subtract positive numbers from negative numbers.
- Identify prime, even and odd numbers.
- Determine if an estimate is reasonable.
- Translate number words to numerals.
- Define numbers in terms of tens and hundreds.
- Find 100 and 1000 more or less than a given number.
- Determine multiples of a given number.
- Translate a decimal written in words to a numeral.
- Find .1 and .01 more than a given number.
- Find the percentage of the shaded portion of a circle.
- Find the least common multiple and the greatest common factor.

### Number and Operations – Fractions

- Add and subtract fractions with unlike denominators.
- Find fraction equivalents.
- Solve word problems with addition and subtraction of fractions using estimation.
- Multiply a fraction or whole number by a fraction.
- Determine the area of a rectangle with a fractional side.
- Compare a number multiplied by a fraction less than, equal to, or more than 1.
- Divide fractions by whole numbers; divide whole numbers by fractions.
- Solve real word problems by dividing fractions by whole numbers.
- Reduce fractions.
- Change fractions to improper fractions.
- Order fractions and mixed numbers on a number line.
- Order fractions, decimals and percentages from least to greatest.
- Compare fractions by using symbols for greater than, less than or equal to.
- Use a hundred block to determine fractions and percentages.
- Find the percentages and decimal equivalents of common fractions:  $1/2$ ,  $1/4$ ,  $1/5$ ,  $1/8$ ,  $1/10$ .

## Measurement and Data

- Convert within a given system of measurement (e.g. 1 liter = 1000 milliliters).
- Determine volume with a given set of measurements.
- Determine the appropriate unit of measure both customary and metric (e.g. feet rather than inches to measure the length of your backyard).
- Add, subtract, multiply and divide with money.
- Determine the amount of change received from a purchase.
- Estimate by rounding to the nearest dollar.
- Determine the total cost of purchased items.
- Determine the profit after expenses.
- Determine how many items can be purchased within a given budget.
- Find the unit cost given the total cost and the number of equal units.
- Figure the balance in a savings account after withdrawals and deposits.
- Find the time after adding or subtracting hours and minutes; also determine the amount of elapsed time.
- Determine dates on a calendar (e.g., what was the date a week ago yesterday).
- Determine the number of years in a decade, a century and a millennium.
- Determine which temperature measurement system (e.g. water freezes at 0 degrees – Celsius or Fahrenheit?).

## Geometry

- Find the coordinates of given points on a grid.
- Using coordinates, interpret locations (e.g. find the Business School on a campus grid map).
- Identify properties of two-dimensional figures.
- Identify acute, obtuse, straight and right angles.
- Find the area of triangles and quadrilaterals.
- Classify triangles by their sides. (e.g. equilateral, scalene, isosceles).
- Determine the sum of the angles in a triangle and a quadrilateral.
- Find the perimeter of a parallelogram.
- Identify a line of symmetry.
- Determine if lines are parallel or perpendicular.
- Determine whether shapes are congruent or similar.
- Given two angles of a parallelogram, find the other two angles.
- Determine the value of supplementary angles, given the value of one angle.
- Make a comparison of the areas of a parallelogram after doubling its perimeter.
- Find the length of each side of a square given the perimeter.
- Identify a cube, cylinder, cone, rectangular prism.
- Identify diameter, radius, chord, center and circumference of a circle.
- Match the degree of a turn with its corresponding fraction (e.g.  $1/4 = 90$  degrees).

## Data Analysis, Statistics and Probability

- Find the mean, mode, median and range of a given set of numbers.
- Describe the probability of an event using ratios and percentages; also using 1 for “certain” and 0 for “impossible”.
- Interpret data on graphs, including double bar graph.
- Transfer information from a line graph to a chart.
- Predict future events based on evidence from past events.

## Reasoning and Problem Solving

- Determine which piece of information is missing or is irrelevant when solving a word problem.
- Determine the reasonableness of a solution to a problem.
- Determine the possible number of combinations using different sets.

**Extras: Fraction Cut-outs, Fraction Puzzles, Hundred Chart, Brain Aerobics**

## **IMPORTANT!**

### **Instructions for Parents**

- To use Summer Math Skills Sharpener, simply tear off a page and have your child complete it. The book is designed to be used 3-4 days per week for 10 weeks.
- Our math books are now support the Common Core Curriculum and the Standards of all 50 states. Therefore, some materials may not have been presented to your child. **Please allow your child to skip concepts not yet learned. Introduce new concepts only if your child shows readiness.**
- Check answers immediately for optimal feedback. Solution pages are provided at the back of the book. (**Solution pages represent only ONE method of solving each problem.**) A Lesson Tracker has been added for your convenience.
- “Help Pages” have been added at the front of the book to clarify certain concepts.
- Allow your child to use a calculator only for those problems marked “Calculator Skill.”
- When solving division problems, students should use remainders when necessary.
- The problems labeled “Hundred Chart” are to be used with the chart at the back of the book. Your child may use beans, buttons, coins, etc. for markers.
- When solving fraction problems, students should reduce answers to the lowest possible terms.
- The problems labeled “Hands on Fraction” may be solved with the help of the “Fraction Cut-Outs” at the back of the book. Save them to use throughout the book. For example, with unlike denominators:  
$$\frac{1}{4} + \frac{3}{8}$$
: Trade the  $\frac{1}{4}$  piece for two  $\frac{1}{8}$  pieces and add.
- Two “Fraction Fun Puzzle” pages are located at the back of the book and may be completed at any time.
- A page entitled “Brain Aerobics” is located at the back of the book. The answers to these questions are on the back page.
- A “Glossary of Terms” and a “Table of Measurements” are at the back of the book.
- Adjust the program to vacations, etc. Presentation of mixed concepts on every page ensures that all skills are reinforced; therefore, pages may be completed in any order.
- If your child experiences difficulty with concepts that have been already taught, address the problem with his or her teacher in the fall; more consistent problems indicate that a tutor may be needed.
- Please read the information on the back of this page.

We appreciate your comments. Please send in the enclosed evaluation page before November 1<sup>st</sup>, after you child has returned to school in the fall and you are able to determine the success of the Summer Math Skills Sharpener.

## SUBTRACTING A FRACTION FROM A WHOLE NUMBER

**Example:**  $7 - \frac{3}{8}$

1st  
Step

$$\begin{array}{r}
 7 \\
 - \frac{3}{8} \\
 \hline
 \end{array}
 \xrightarrow{\text{(trade)}}
 \begin{array}{r}
 6 \frac{8}{8} \\
 - \frac{3}{8} \\
 \hline
 \end{array}$$

Trade (borrow) one whole using same denominator as the fraction. 7 becomes  $6 \frac{8}{8}$ .

2nd  
Step

$$\begin{array}{r}
 6 \frac{8}{8} \\
 - \frac{3}{8} \\
 \hline
 6 \frac{5}{8}
 \end{array}$$

Subtract fractions. Subtract whole numbers.

Simplify. (Write in lowest terms)

## MULTIPLYING FRACTIONS

When multiplying two fractions: Multiply the numerators to find the product's numerator.

Multiply the denominators to find the product's denominator.

**Example:**

$$\frac{1}{2} \times \frac{1}{3} = \frac{1 \times 1}{2 \times 3} = \frac{1}{6}$$

↙ multiply the numerators  
↘ multiply the denominators

\*It does not matter if the denominators are like or unlike.

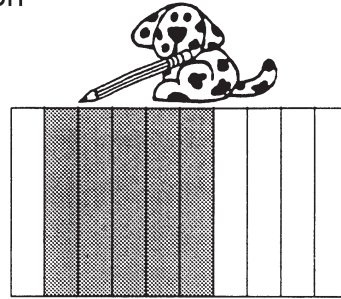
1. Convert these liquid measurements into decimals:

a. 1 pint = \_\_\_\_\_ tenths of a quart

b. 1 quart = \_\_\_\_\_ hundredths of a gallon

2. What part of this rectangle is shaded?

a. 5.5      b. .5      c. 5

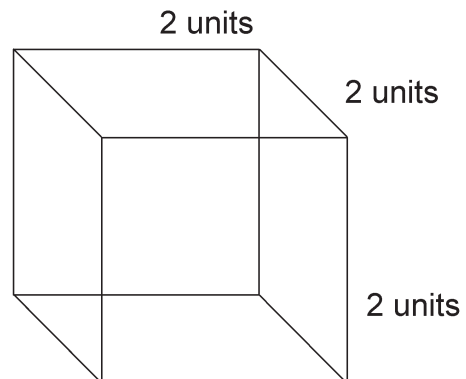


3. Hands on fraction:  $\frac{5}{8} - \frac{1}{4} =$  \_\_\_\_\_

4. a. 
$$\begin{array}{r} 38 \\ \times 44 \\ \hline \end{array}$$

b.  $56 \overline{) \$124.32}$

5. How many cubic units? \_\_\_\_\_



6. Problem solving: In a leap year, how many days have passed when  $\frac{1}{2}$  of the year is over? \_\_\_\_\_

7. Mental math: a.  $\$20.75 - \$5.75 =$  \_\_\_\_\_ b.  $\$10.45 + \$20.55 =$  \_\_\_\_\_

8. Hands on fraction: Compare and order from least to greatest.

$$\frac{3}{4} \quad \frac{2}{3} \quad \frac{5}{8}$$

\_\_\_\_\_

9. Mental math:

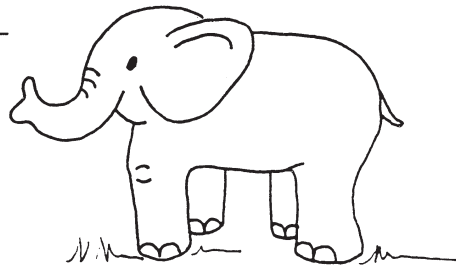
a.  $1 \div \frac{1}{2} =$  \_\_\_\_\_

b.  $2\frac{1}{2} + \frac{1}{2} =$  \_\_\_\_\_

10. Estimate: Would the difference of  $2\frac{1}{2} - 1\frac{3}{4}$  be more or less than 1?

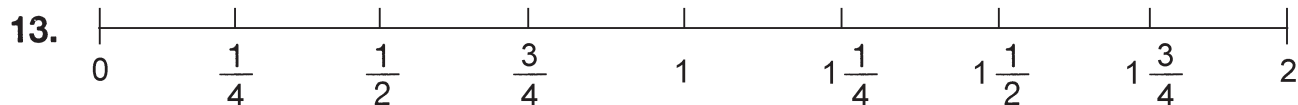
\_\_\_\_\_

11. If the total weight of 4 elephants is 40,000 lbs., what is their average weight? \_\_\_\_\_  
 What would 7 elephants weigh? \_\_\_\_\_



12.

- 7	2	6
1	8	2



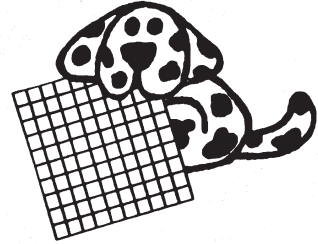
- a. Is the sum of  $\frac{1}{4} + \frac{3}{5}$  closer to 1 or  $1\frac{1}{2}$ ? \_\_\_\_\_

- b. Is the sum of  $\frac{5}{6}$  and  $\frac{7}{8}$  between 0 and 1 or between 1 and 2? \_\_\_\_\_

1. Hundred chart: You can add or subtract 10 by moving a marker down or up one row. Start at 76. Move 3 rows up. What number have you subtracted? \_\_\_\_\_

2. a. 
$$\begin{array}{r} 781 \\ \times 75 \\ \hline \end{array}$$

b.  $27 \overline{)6,190}$



3. Mental math:  $350 + 225 =$  \_\_\_\_\_

4. If you put 2 gallons of water in a pot, how many pints of water would you have? \_\_\_\_\_  
How many quarts? \_\_\_\_\_

5. Arrange these decimals: .780 .781 .708

$$\boxed{\phantom{000}} > \boxed{\phantom{000}} > \boxed{\phantom{000}}$$

6. a. 
$$\begin{array}{r} 70 \frac{5}{8} \\ - 43 \frac{3}{8} \\ \hline \end{array}$$

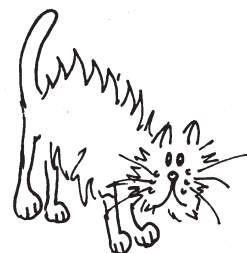
b. 
$$\begin{array}{r} \frac{4}{5} \\ + \frac{1}{10} \\ \hline \end{array}$$

7. Look at the numeral '6' in these two numbers: 6002 and 2006  
How many times more is the '6' in 6002 than the '6' in 2006?  
Circle: 100 times      1,000 times      10 times

8. Leo and Will had pizza for dinner. Leo ate  $\frac{3}{8}$  of a pizza and Will ate  $\frac{3}{4}$  of a pizza. Use your fraction cut-outs to see if they ate more or less than 1 whole pizza.
- \_\_\_\_\_

9.  $56 + n = 98$      $n =$  \_\_\_\_\_

10. Hands on fraction:  $\frac{1}{3} \times 6 =$  \_\_\_\_\_



11. In Mrs. Smith's fifth grade, 2 out of every 5 students have pets. If there are 30 students in her class, how many students have pets? \_\_\_\_\_

12. a. Rewrite this decimal after you multiply by 10.

.03 \_\_\_\_\_

- b. Rewrite this decimal after you divide by 10.

.5 \_\_\_\_\_

13. Match each decimal on the left with a decimal on the right so each sum is 1.8:

a. .6                      .73

b. 1.07                    1.2

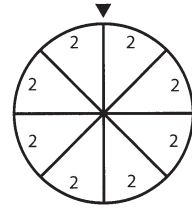
c. .9                        .9



### Lesson #34

1. a. Extend this number pattern: 40 32 24 \_\_\_\_ \_\_\_\_  
 b. What rule did you use? \_\_\_\_\_

2. Use 0 for impossible and 1 for certain to answer the questions. If you spin this wheel, what is the **probability** that the arrow will point to a:



- a. 2 \_\_\_\_\_      b. 3 \_\_\_\_\_
3. Circle the correct symbols.

- a. .05 (<, > or =) .050      b. .751 (<, > or =) .750

4. Fill in the **equivalent** amounts.

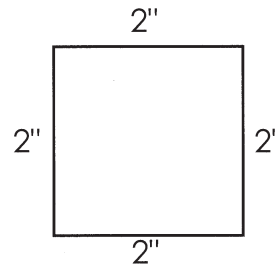
Percent	Decimal	Fraction
50%	.5	$\frac{1}{2}$
		$\frac{1}{4}$
20%		
	.125	
		$\frac{1}{10}$

5. a.  $(-6) + (-5) =$  \_\_\_\_\_      b.  $(-6) - 5 =$  \_\_\_\_\_

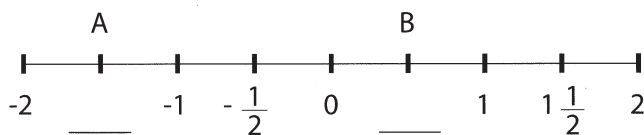
6. The area of this square is 4 **square inches**.

If you double the length of each side, the area will:

- a. double      b. triple      c. quadruple


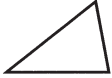
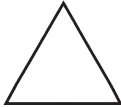


7. Fill in the missing numbers:



## Lesson #34 continued

8. Match:

- |    |   |             |
|----|---|-------------|
| a. |  | equilateral |
| b. |  | scalene     |
| c. |  | isosceles   |

9. Draw a circle around  $\frac{2}{5}$  of these stars.

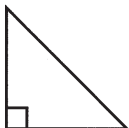



10. If  $\square + \square = 10$  and  $\square + \triangle = 7$   
 What is  $\square$  ? \_\_\_\_\_ What is  $\triangle$  ? \_\_\_\_\_

11. a.  $120 \div 10 =$  \_\_\_\_\_ c. 100% of  $1\frac{1}{2} =$  \_\_\_\_\_  
 b.  $200 \times 100 =$  \_\_\_\_\_ d. 100% of .2 = \_\_\_\_\_

- |  |                                     |
|--|-------------------------------------|
| 12. a. Water boils at $212^\circ$        | <b>Fahrenheit</b> or <b>Celsius</b> |
| b. Water freezes at $0^\circ$            | <b>Fahrenheit</b> or <b>Celsius</b> |
| c. Normal human body temperature is 98.6 | <b>Fahrenheit</b> or <b>Celsius</b> |

13. Are these triangles **congruent** or **similar**?

- |  |  |       |
|--|--|-------|
| a.  | b.  | _____ |
|--|--|-------|

# HUNDRED CHART

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>
<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>	<b>49</b>	<b>50</b>
<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>
<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>	<b>65</b>	<b>66</b>	<b>67</b>	<b>68</b>	<b>69</b>	<b>70</b>
<b>71</b>	<b>72</b>	<b>73</b>	<b>74</b>	<b>75</b>	<b>76</b>	<b>77</b>	<b>78</b>	<b>79</b>	<b>80</b>
<b>81</b>	<b>82</b>	<b>83</b>	<b>84</b>	<b>85</b>	<b>86</b>	<b>87</b>	<b>88</b>	<b>89</b>	<b>90</b>
<b>91</b>	<b>92</b>	<b>93</b>	<b>94</b>	<b>95</b>	<b>96</b>	<b>97</b>	<b>98</b>	<b>99</b>	<b>100</b>

## 5TH GRADE

### **Challenge yourself with these BRAIN AEROBICS:**

1. There are 5 poles in a straight row, each ten feet apart. What is the total distance between the first pole and the fifth pole?
2. There are 30 children in Mrs. O'Boyle's class. One half of the the children are boys. All but 2 of the girls in the class attended the picnic. How many girls attended the picnic?
3. On Monday Sherry deposited (added) \$7.00 to her savings account. On Tuesday she withdrew (took out) \$6.00. She then had a total of \$15.00 in her account. How much money did she have in her account before Monday?
4. An item that you are purchasing costs \$11.10. You want your change to be a \$10 bill. How much money must you give the clerk?
5. You have 40 blue ribbons. You have  $\frac{1}{2}$  as many red ribbons as blue ribbons. You have  $\frac{1}{2}$  as many yellow ribbons as red ribbons. How many yellow ribbons do you have?
6. If June 7th is a Saturday, on what day is the Fourth of July?
7. Sally has quarters and dimes. The coins total \$1.20. She has twice as many quarters as dimes. How many quarters does she have? How many dimes?
8. A grab bag contains 30 marbles, 25 rings and 28 key chains. You want either a ring or a key chain. If you only get one pick, will you most likely get what you want?
9. To the nearest year, how old would you be if you were one million minutes old?
10. I am a number less than 100 and more than 30. My tens place is twice the size of my ones place numeral. When you add my numerals together they equal an odd number. What number am I?

The answers are on the back!

# WHOLE

# FRACTION CUT-OUTS

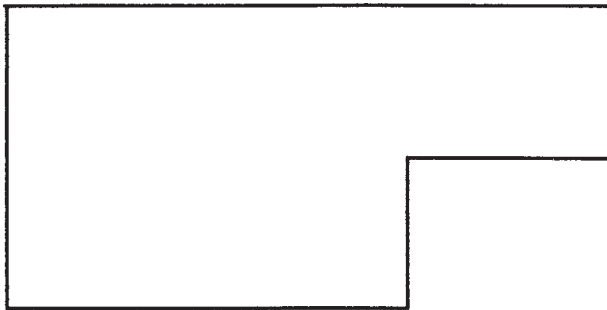
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

# Fraction Fun Puzzles

Use your fraction cut-outs to help you solve these puzzles.  
The answers are on the back of this page.

Cover this shape using only 2 pieces.

I.



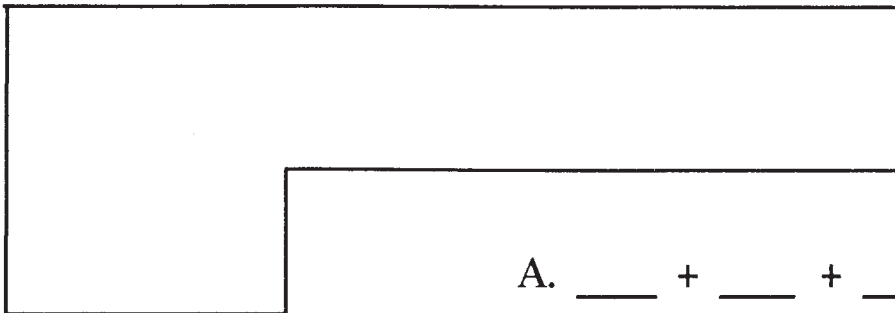
A.  $\frac{\quad}{\quad} + \frac{\quad}{\quad}$

Now use 3 pieces

B.  $\frac{\quad}{\quad} + \frac{\quad}{\quad} + \frac{\quad}{\quad}$

II.

Cover this shape using only 3 pieces.



A.  $\frac{\quad}{\quad} + \frac{\quad}{\quad} + \frac{\quad}{\quad}$

Now use only 4 pieces.

B.  $\frac{\quad}{\quad} + \frac{\quad}{\quad} + \frac{\quad}{\quad} + \frac{\quad}{\quad}$

## The Metric Units

### Temperature - Celsius

0°C: the freezing point of water  
37°C: the normal body temperature  
100°C: the boiling point of water

### Mass

1000 milligrams (mg) = 1 gram  
1000 grams = 1 kilogram (kg)  
1000 kilograms = 1 metric ton (t)

### Capacity

1000 milliliters (mL) = 1 liter (L)  
1000 liters = 1 kiloliter (kL)

### Length

10 millimeters (mm) = 1 centimeter  
10 centimeters (cm) = 1 decimeter  
1000 millimeters (mm) = 1 meter (m)  
100 centimeters = 1 meter (m)  
10 decimeters (dm) = 1 meter  
1000 meters (m) = 1 kilometer (km)

## The Customary Units

### Temperature - Fahrenheit

32°F: the freezing point of water  
98.6°F: the normal body temperature  
212°F: the boiling point of water

### Weight

1 pound (lb) = 16 ounces (oz)  
1 ton = 2,000 pounds

### Time

1 minute (min) = 60 seconds (s)  
1 hour = 60 minutes  
1 day = 24 hours  
1 week = 7 days  
1 month (mo) = approx. 4 weeks  
1 year (yr) = 365 days  
52 weeks  
12 months  
  
1 decade = 10 years  
1 century = 100 years

### Capacity

1 cup (c) = 8 fluid ounces (fl oz)  
1 pint (pt) = 16 fluid ounces  
2 cups = 32 fluid ounces  
4 cups = 2 pints  
1 gallon (gal) = 128 fluid ounces  
16 cups = 8 pints  
4 quarts

### Length

1 foot (ft) = 12 inches (in)  
1 yard (yd) = 36 inches  
3 feet = 3,280 feet  
1 mile (mi) = 1,760 yards

# GLOSSARY OF TERMS AND FORMULAS

**a.m.:** a way of expressing time between 12:00 midnight and 12:00 noon.

**acute angle:** an angle measuring less than 90 degrees.

**addends:** numbers to be added together in an addition problem.

**algebraic expression:** an expression that uses at least one letter to represent a number.

**angle:** the measured space between two lines that meet at one point.

**area:** the measure of a region in square units.

Formulas:

Quadrilateral:  $A = \text{length} \times \text{width}$

Triangle:  $A = \frac{1}{2} \times \text{base} \times \text{height}$

Circle:  $A = \pi r^2$

$\pi \approx 3.14$

$r = \text{radius}$

**average:** a number obtained by adding a group of numbers together and dividing by the number of addends.

**center:** the point from which all points on a circle are equally distant.

**circle:** a closed, curved line. Each point on the circle is the same distance from the center of the circle.

**circumference:** the distance around a circle.

Formula:  $c = 2 \pi r$   $r = \text{radius}$   $\pi \approx 3.14$

**common denominator:** a multiple of all denominators in a problem.

**common factor:** a number that is a factor of two other numbers is a common factor.

Example: 3 is a common factor of 9 and 12.

**common multiple:** a number that is a multiple of two other numbers.

Example: 24 is a common multiple of 6 and 4.

**complementary angle:** the number in degrees given to an angle that when added to another angle will give 90 degrees.

**congruent:** being the same.

**coordinates:** number pairs used in graphing. The horizontal axis is listed first and the vertical axis is listed second.

Example: 8, 10

**customary measurement:** units of measurement used in the United States.

Example: feet, pounds, miles, etc.

**decade:** a period of 10 years.

**decimal point:** a period put just before the decimal fraction such as the periods in .625 and .08

**degree:** a unit used to measure an angle or temperature.



- 1)  $63 \div 7 = 9$
- 2)  $\frac{1}{2} = \frac{4}{8}$   
 $-\frac{3}{8} = \frac{1}{8}$
- 3)  $392$   
 $\times 511$   
 $392$   
 $1710$   
 $\underline{174,762}$
- 4) Answers will vary
- 5)  $41 \overline{) 1234}$   
 $\underline{188}$   
 $46$
- 6) a.  $434$  Round  $\downarrow$   $430$   
 $-229$   $\uparrow$   $-230$   
 $\underline{200}$
- b.  $1,029$   $\uparrow$   $1,030$   
 $-1,003$   $\downarrow$   $1,000$   
 $\underline{30}$
- 7)  $26 \frac{3}{5}$   
 $+ 4 \frac{2}{5}$   
 $\underline{30 \frac{5}{5}} = 31$
- 8) hundred thousand
- 9) C
- 10) a. Perimeter = 2 lengths + 2 widths  
 $P = 2L + 2w$   
 $L = 12''$   $w = 10''$   
 $P = 2(12) + 2(10)$   
 $P = 24 + 20 = 44 \text{ in}$
- b. Area =  $L \times w$   
 $A = 12 \times 10 = 120 \text{ sq in}$
- 11)  $\frac{1}{2} \div \frac{1}{2} = \frac{1}{2} \times \frac{2}{1} = 1$
- 12) a.  $2.00 \div 49¢ = 4.08$  rounded down (4)
- b.  $2.00 \div 21¢ = 9.5$  rounded down (9)
- c.  $2.00 \div 9¢ = 22.2$  rounded down (22)
- d.  $2.00 \div 67¢ = 2.9$  rounded down (2)
- 13) Halfway between 5:00 and 5:30 = 5:15  
 $5:15$   
 $-1:07$   
 $\underline{5:08}$

- 1) Sophia  $\leftarrow$  Isabel is shorter than | Mia  $\leftarrow$  Sophia is shorter than | Mia Sophia (Yes) Isabel
- 2)  $.636$  Round  $\uparrow$  (.64)  
 $.041$   $\downarrow$  (.04)  
 $.507$   $\uparrow$  (.51)
- 3)  $17$   
 $\underline{26}$   
 $\underline{26}$   
 $80$
- 4) a.  $811$   
 $\times 47$   
 $\underline{5677}$   
 $3244$   
 $\underline{38,117}$
- b.  $16 \overline{) 130}$   
 $\underline{128}$   
 $\underline{2}$
- 5) a.  $600 + 50 + 7 = 657$   
 b. 5 hundreds = 500  
 14 tens = 140  
 8 ones = 8  
 $500 + 140 + 8 = 648$   
 c.  $6400 + 8 = 6,408$   
 d. 600 hundreds = 600  
 48 tens = 480  
 $600 + 480 = 1,080$
- 6)  $214 + 40 = 254$
- 7) a.  $\frac{20}{100} \div \frac{20}{20} = \frac{1}{5}$   
 b.  $\frac{10}{5} \div \frac{10}{10} = \frac{1}{5}$
- 8)  $\frac{5}{8} = \frac{5}{8}$   
 $+\frac{3}{4} = \frac{6}{8}$   
 $\underline{\frac{11}{8}} = 1 \frac{3}{8}$
- 9)  $10.92$  Round  $\uparrow$  11
- 10)  $50 \frac{3}{5}$   
 $-23 \frac{2}{5}$   
 $\underline{27 \frac{1}{5}}$
- 11)  $\frac{7}{10}$  hr. Elsie  
 $\frac{4}{5}$  hr. =  $\frac{8}{10}$  Raymond
- 12)  $(5+6) \times 5 = 55$   
 $(6+5) \times 5 = 55$   
 (Yes)
- 13) a. Certain - nothing but dimes  
 b. likely - because there are more quarters than nickels  
 c. impossible - no half dollars

- 1) see Table of Measurements
- a. 1 pint =  $\frac{1}{2}$  quart = (5)
- b. 1 quart =  $\frac{1}{4}$  gallon = (25)
- 2) 5 shaded boxes  $\frac{1}{2}$  or .5  
 10 total boxes
- 3)  $\frac{5}{8} = \frac{5}{8}$   
 $-\frac{1}{4} = \frac{2}{8}$   
 $\underline{\frac{3}{8}}$
- 4) a.  $38$   
 $\times 44$   
 $\underline{152}$   
 $\underline{152}$   
 $1,672$
- b.  $56 \overline{) 124.32}$   
 $\underline{112}$   
 $\underline{123}$   
 $\underline{112}$   
 $112$
- 5) Volume = Length  $\times$  Width  $\times$  Height  
 $2 \times 2 \times 2 = 8$  cubic units
- 6) 1 leap year = 366 days  
 $2 \overline{) 183}$   
 $\underline{366}$   
 $\underline{2}$   
 $\underline{16}$   
 $\underline{16}$   
 $6$
- 7) a. \$15.00  
 b. \$31.00
- 8)  $\frac{5}{8}, \frac{2}{3}, \frac{3}{4}$
- 9)  $1 \div \frac{1}{2} = \frac{1}{1} \times \frac{2}{1} = 2$
- 10)  $2 \frac{1}{2} = 2 \frac{2}{4} = \frac{10}{4}$   
 $-1 \frac{3}{4} = -1 \frac{3}{4} = \frac{7}{4}$   
 $\underline{\frac{3}{4}}$  less than 1
- 11)  $40,000 \div 4 = 10,000$  lbs.  
 $10,000 \times 7$  elephants =  $70,000$  lbs.
- 12)  $726$   
 $+182$   
 $\underline{908}$
- 13) a.  $\frac{1}{4} = \frac{1}{4}$  (1)  
 $+\frac{1}{2} = \frac{2}{4}$   
 $\underline{\frac{3}{4}}$
- b.  $\frac{3}{4} = \frac{3}{4}$   
 $+\frac{1}{2} = \frac{2}{4}$   
 $\underline{\frac{5}{4}} = 1 \frac{1}{4}$  (1 and 2)

- 1)  $409,577$   $449,890$   $499,700$
- 2)  $17 \frac{3}{4}$   
 $6 \frac{1}{4}$   
 $\underline{11 \frac{4}{4}} = 11 \frac{1}{2}$
- 3)  $343$   
 $\times 780$   
 $\underline{27440}$   
 $\underline{2401}$   
 $267,540$
- 4)  $\frac{1}{2} = \frac{2}{4}$   
 $\frac{1}{4} = \frac{1}{4}$   
 $+\frac{3}{4} = \frac{3}{4}$   
 $\frac{6}{4} = 1 \frac{2}{4} = 1 \frac{1}{2}$
- 5)  $27 \overline{) 81}$   
 $\underline{81}$   
 $0$
- 6) a.  $8,903$  Round  $\uparrow$   $9,000 \div 10 = 900$   
 b.  $7,352$   $\downarrow$   $7,000 \div 100 = 70$
- 7)  $\frac{3}{4} = \frac{6}{8}$  so  
 $7 > \frac{6}{8}$
- 8)  $\frac{1}{2} \div 4 = \frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$
- 9) a.  $16 \times 6 = 96$   
 $34 \times 6 = 204$   
 $30 \div 6 = 5$   
 $42 \div 6 = 7$   
 $60 \div 6 = 10$   
 $66 \div 6 = 11$
- 10)  $.042$
- 11) \$1.33 per minute  
 $\times 6$  minutes  
 $\underline{\$7.98}$   
 $\$2.37$  1st minute  
 $+7.98$   
 $\underline{\$10.35}$
- 12) b.  $\frac{1}{4} \times \frac{10}{10} = \frac{10}{40}$   
 c.  $\frac{1}{4} \times \frac{25}{25} = \frac{25}{100}$   
 d.  $\frac{1}{4} \times \frac{4}{4} = \frac{4}{16}$   
 e.  $\frac{1}{4} \times \frac{250}{250} = \frac{250}{1000}$   
 f.  $\frac{1}{4} \times \frac{3}{3} = \frac{3}{12}$
- 13) Answers will vary