Name: _Answer Key_

# 5th Grade into 6th Grade Math I Summer Homework

**Addition and Subtraction:** Find the sum and difference of the two numbers in each problem *without* a calculator. Show all work.

$$\begin{array}{r} 652 \\ +345 \\ \hline 997 \end{array}$$

$$\begin{array}{r} 726 \\ +268 \\ \hline 994 \end{array}$$

$$\begin{array}{r} 7.75 \\ +1.46 \\ \hline 9.21 \end{array}$$

$51.4 + 2.86$

$$\begin{array}{r} 2.86 \\ 51.40 \\ \hline 54.26 \end{array}$$

$$\begin{array}{r} 407 \\ -198 \\ \hline 209 \end{array}$$

$$\begin{array}{r} 7,007 \\ -\ 198 \\ \hline 6809 \end{array}$$

$$\begin{array}{r} 80.401 \\ -44.230 \\ \hline 36.171 \end{array}$$

$75.89 - 9.4$

$$\begin{array}{r} 75.89 \\ -\ 9.4 \\ \hline 66.49 \end{array}$$

**Multiplication and Division:** Find the product and quotient of the two numbers in each problem. Do not use a calculator. Show all work. If there is a remainder, state the remainder as R = ____.

$65 \times 4 =$

$$\begin{array}{r} 65 \\ \times\ 4 \\ \hline 260 \end{array}$$

$84 \times 39 =$

$$\begin{array}{r} 84 \\ \times\ 39 \\ \hline 756 \\ +2520 \\ \hline 3276 \end{array}$$

$591 \div 7 =$

$$\begin{array}{r} 84\ r3 \\ 7\overline{)591} \\ -56\downarrow \\ \hline 31 \\ -28 \\ \hline 3 \end{array}$$

$264 \div 2 =$

$$\begin{array}{r} 132 \\ 2\overline{)264} \\ -2 \\ \hline 06 \\ -6 \\ \hline 04 \\ -4 \\ \hline 0 \end{array}$$

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**Rounding:** Underline the given place value. Look to the right. If this digit is 5 or greater, increase the underlined digit by 1. If the digit to the right is less than 5, keep the underlined digit the same. *Round to the nearest…*

ten 3,4<u>7</u>9 _3,480_

hundred 7,<u>5</u>53 _7,600_

one 3.<u>5</u>68 _4_

ten 1<u>6</u>2.21 _160_

one 1<u>4</u>.36 _14_

thousand 9<u>7</u>,054 _97,000_

**Comparing Decimals:** Use the signs >, <, or =.

0.205 ⊘ 0.210

0.03 ⊜ 0.03

0.040 ⊘ 0.050

1.0 ⊘ 0.1000

0.52 ⊘ 0.500

0.41<u>0</u> ⊘ 0.405

**Comparing Fractions:** Compare each pair of numbers. Write the correct comparison symbol (<, >, or = ) in each circle. Make sure you have common denominators (or some other method to compare) before writing the inequality symbol.

$\frac{3}{8}$ ⊘ $\frac{5}{8}$

$\frac{3}{4}$ ⊘ $\frac{3}{8}$

$\frac{3}{7}$ ⊘ $\frac{1}{4}$

$\frac{7}{8}$ ⊘ $\frac{3}{4}$

**Simplifying Fractions:** Simplify the following fractions. If the fractions are improper, change them to mixed numbers then simplify.

$\frac{14}{28}$ ÷14 = $\frac{1}{2}$

$\frac{15}{55}$ ÷5 = $\frac{3}{11}$

$\frac{12}{100}$ ÷2 = $\frac{6}{50}$ ÷2 = $\frac{3}{25}$

$\frac{5}{10}$ = $\frac{1}{2}$

$\frac{15}{20}$ ÷5 = $\frac{3}{4}$

$\frac{20}{25}$ ÷5 = $\frac{4}{5}$

**Ordering Fractions:** Order the following fractions from **least** to **greatest**. Make sure you have common denominators (or some other method to compare) before ordering the fractions.

$\frac{2}{10}$ $\frac{1}{5}$, $\frac{48}{510}$ $\frac{1}{10}$, $\frac{6}{10}$, $\frac{7}{10}$     $\frac{1}{10}, \frac{1}{5}, \frac{6}{10}, \frac{7}{10}, \frac{4}{5}$

$\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{6}$, $\frac{1}{3}$, $\frac{1}{5}$     $\frac{1}{6}, \frac{1}{5}, \frac{1}{4}, \frac{1}{3}, \frac{1}{2}$

**Factors:** List all the factors for each number. (Numbers that can be multiplied together to get to the numbers listed below)

18: _1, 2, 3, 6, 9, 18_
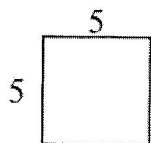
30: _1, 2, 3, 5, 6, 10, 15, 30_

23: _1, 23_

**Multiples:** List the first 5 multiples of each number. (Multiply 1-5 by the numbers listed below)
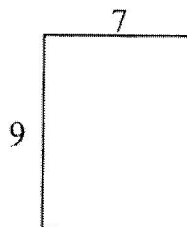
8: _8, 16, 24, 32, 40_

12: _12, 24, 36, 48, 60_

**Area:** The number is square units needed to cover a region is the area (square units). The formula is A=l x w. For each problem, copy the formula, substitute the length and width, and solve. Write your answer with square units.

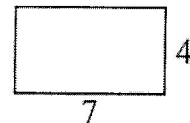5 × 5 square (sides 5 and 5)
$A = l \times w$
$A =$ _5 × 5_
_25u²_

7 × 9 rectangle (top 7, side 9)
$A = l \times w$
$A =$ _9 × 7_
_63u²_

7 × 4 rectangle (top 7, side 4)
$A = l \times w$
$A =$ _7 × 4_
_28u²_

**Adding and Subtracting Fractions and Mixed Numbers:** Add or subtract the following fractions. Make sure you have *common denominators before adding or subtracting.* Remember, you only add or subtract the numerator (top number) and keep the denominator (bottom number) the same. Simplify your final answers.

$\dfrac{6}{10} + \dfrac{3}{10} = \dfrac{9}{10}$

$\dfrac{3}{8} + \dfrac{2}{8} = \dfrac{5}{8}$

$\dfrac{1}{12} + \dfrac{4}{6} = \dfrac{2}{12} = \dfrac{9}{12} \rightarrow \dfrac{3}{4}$

$\dfrac{8}{12} - \dfrac{3}{12} = \dfrac{5}{12}$

$\dfrac{7}{10} - \dfrac{2}{4} =$
$\dfrac{14}{20} - \dfrac{10}{20} = \dfrac{4}{20} \rightarrow \dfrac{1}{5}$

$\dfrac{4}{5} - \dfrac{1}{4} =$
$\dfrac{16}{20} - \dfrac{5}{20} = \dfrac{11}{20}$

**Multiplying Fractions:** Multiply the following fractions. Multiply the numerators, then multiply the denominators. Simplify if necessary.

$\dfrac{3}{4} \times \dfrac{1}{3} = \dfrac{3}{12} \rightarrow \dfrac{1}{4}$

$\dfrac{2}{5} \times \dfrac{5}{8} = \dfrac{10}{40} \rightarrow \dfrac{1}{4}$

$\dfrac{7}{8} \times \dfrac{2}{1} = \dfrac{14}{8} \rightarrow 1\dfrac{6}{8} \rightarrow 1\dfrac{3}{4}$

**Quadrilaterals:** Identify the quadrilateral described.

I am a two-dimensional figure that has four sides. I have four 90 degree angles. I have two sets of parallel lines. I also have two sides that are one length and my other two sides are a different length. Who am I? _a rectangle_

I am a two-dimensional shape that has four sides. I have two obtuse angles and two acute angles. I have two different sets of parallel sides. I also have two sides that are one length, and my other two sides are a different length. Who am I?
_a parallelogram_

I am a two-dimensional shape that has four 90 degree angles. I have four sides that are all the same length. I have two pairs of parallel lines. Who am I?
_a square_

I am a two-dimensional shape that has four sides, two pairs of parallel lines and all sides are equal. Who am I? _a rhombus_

I am a two-dimensional shape that has four sides and exactly one pair of parallel lines. Who am I? _a trapezoid_

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**Conversions:** Convert the following customary units.

4 feet and 3 inches = _____51_____ inches

3 yards = _____36_____ feet

3 meters = _____300_____ centimeters   100 cm = 1 m

2 kg = _____2,000_____ grams   1000 g = 1 kg

2 tons = _____4,000_____ pounds   2000 lbs = 1 ton

1 pound and 7 ounces = _____23_____ ounces   16 oz = 1 lb

81 minutes = _____1_____ hours and _____21_____ minutes

1 hour and 38 minutes = _____98_____ minutes

**Graphing:** Use the graph to answer the questions.

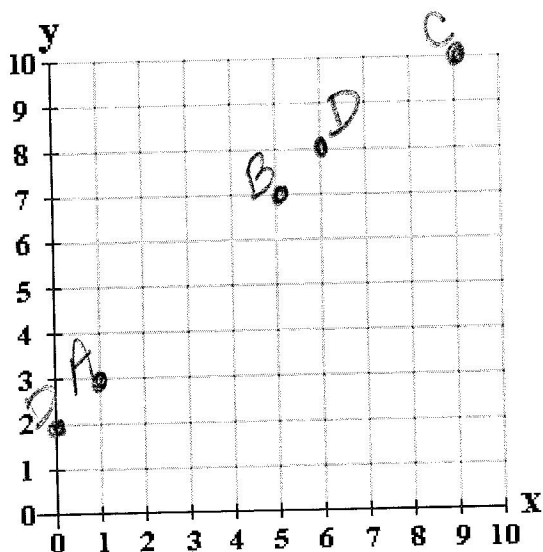This bar graph shows David's savings for five months.
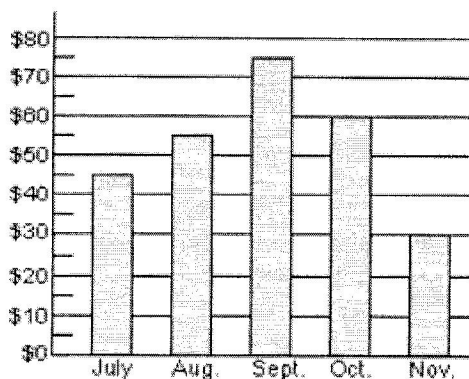


(a) David saved $ _____55_____ in August.

(b) He saved the least money in _____November_____.

(c) In _____October_____ he saved twice as much as in November.

(d) He saved $ _____15_____ more in October than in July.   60 - 45 =

5

**Graphing:** Draw a dot on the location of the coordinates. Name the point with the letter.
Remember: The coordinates are in the order of (x, y).

A: (1, 3)

B: (5, 7)

C: (9, 10)

D: (0, 2)

E: (6, 8)

**Order of Operations:** Solve the following problems. Show your work. Be sure to follow the order of operations. PEMDAS (parentheses, exponents, multiplication, division, addition and subtraction (multiplication and division in order of appearance) (addition and subtraction in order of appearance).

$(15 \times 8) - 3 =$

$120 - 3$

$117$

$(30 + 8) \times 6 - 1 =$

$(28 \times 6) - 1$

$228 - 1$

$227$

$36 - 5(16 - 11) =$

$36 - 5(5)$

$36 - 25$

$11$

$25 + 18 \div 6 - 1 =$

$25 + 2 - 1$

$27 - 1$

$26$