Name: *Answer Key*

5th Grade into 6th Grade Math II

Summer Homework

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

$$652 + 345 = 997$$

$$726 + 268 = 994$$

$$7.75 + 1.46 = 9.21$$

$$51.4 + 2.86$$
$$51.4 + 2.86 = 54.26$$

$$407 - 198 = 209$$

$$7,007 - 198 = 6,809$$

$$80.401 - 44.23 = 36.171$$

$$75.89 - 9.4$$
$$75.89 - 9.4 = 66.49$$

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 = ____.

$$65 \times 4 = 260$$

$$84 \times 39 =$$
$$84 \times 39: \quad 756 + 2520 = 3,276$$

$$591 \div 7 = 84 \; R=3$$
$$591 / 7: \quad 56, \; 31, \; 28, \; 3$$

$$264 \div 12 = 22$$
$$264 / 12: \quad 24, \; 24, \; 24, \; 0$$

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...*

tenth 0.3479 _.3_

hundredth 0.7553 _.76_

whole number 3.268 _3_

ten 162.21 _160_

thousandth 0.0036 _.004_

hundred 990.54 _1000_

1

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

0.205 $\big<$ 0.21   0.03 $=$ 0.03

0.040 $\big<$ 0.050   1.0 $\big>$ 0.1000

0.520 $\big>$ 0.500   0.410 $\big>$ 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.

$\dfrac{3}{8}$ $\big<$ $\dfrac{5}{8}$ $\dfrac{3}{4} = \dfrac{6}{8}$ $\big>$ $\dfrac{3}{8}$

$\dfrac{3}{7} \dfrac{14}{\ \ } \dfrac{12}{28}$ $\big>$ $\dfrac{1}{4} \dfrac{17}{17} = \dfrac{7}{28}$ $\dfrac{7}{8}$ $\big>$ $\dfrac{3}{4} = \dfrac{6}{8}$

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.

$\dfrac{2}{10} = \dfrac{1}{5}, \ \dfrac{4}{5} = \dfrac{8}{10}, \ \dfrac{1}{10}, \ \dfrac{6}{10}, \ \dfrac{7}{10}$ $\dfrac{1}{10}, \ \dfrac{1}{5}, \ \dfrac{6}{10}, \ \dfrac{7}{10}, \ \dfrac{4}{5}$

$\dfrac{12}{24} \ \dfrac{6}{24} \ \dfrac{4}{24} \ \dfrac{8}{24}$
$\dfrac{1}{2}, \ \dfrac{1}{4}, \ \dfrac{1}{6}, \ \dfrac{1}{3}, \ \dfrac{1}{5}$ $\dfrac{1}{6}, \dfrac{1}{5}, \dfrac{1}{4}, \dfrac{1}{3}, \dfrac{1}{2}$

$\dfrac{1}{2}, \ \dfrac{5}{16}, \ \dfrac{30}{64}, \ \dfrac{3}{8}, \ \dfrac{9}{32}$ $\dfrac{9}{32}, \dfrac{5}{16}, \dfrac{3}{8}, \dfrac{30}{64}, \dfrac{32}{64}$

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

$\dfrac{14}{28} \div 7 = \dfrac{2}{4} = \dfrac{1}{2}$ $\dfrac{15}{55} \div 5 = \dfrac{3}{11}$ $\dfrac{12}{51} \div 3 = \dfrac{4}{17}$

$\dfrac{34}{48} \div 2 = \dfrac{17}{24}$ $\dfrac{17}{4} = 4\dfrac{1}{4}$ $\dfrac{80}{25} = 3\dfrac{5}{25} = 3\dfrac{1}{5}$

2

Factors: List all the factors for each number.

18: _1, 2, 3, 6, 9, 18_

30: _1, 2, 3, 5, 6, 10, 15, 30_
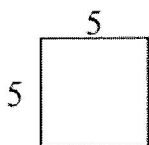
23: _1, 23_

45: _1, 3, 5, 9, 15, 45_

Multiples: List the first 5 multiples of each number.

8: _8, 16, 24, 32, 40_

12: _12, 24, 36, 48, 60_
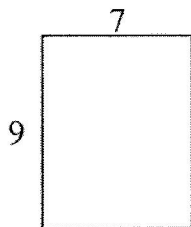
24: _24, 48, 72, 96, 120_

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 by 5 square:
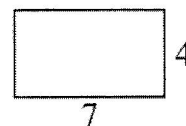
$A = l \times w$

A = _5x5_

25u²

7 by 9 rectangle:

$A = l \times w$

A = _9x7_

63u²

7 by 4 rectangle:

$A = l \times w$

A = _7x4_

28u²

Volume: The amount of space inside a solid figure is the volume of the figure (cubic units).

4 x 2 x 4 prism:

$V = l \times w \times h$

V = _4x2x4_

32u³

2 x 2 x 2 cube:

$V = l \times w \times h$

V = _2x2x2_

8u³

4 x 5 x 5 cube:

$V = l \times w \times h$

V = _4x5x5_
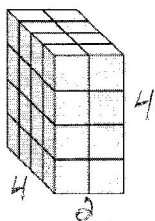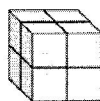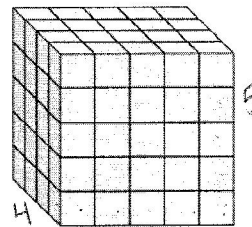
100u³

3

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

$(30 + 8) \times 6 - 1 =$
38 × 6 - 1
228 - 1
227

$36 - 5(16 - 11) =$
36 - 5(5)
36 - 25
11

$25 + 18 \div 6 - 1 =$
25 + 3 - 1
26

$(29 - 18) + 14 \div 2 + 6 =$
11 + 7 + 6
18 + 6
24

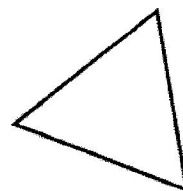$(30 + 8) \times (6 - 1) =$
38 × 5
190

Triangle Types: Label the triangles as acute, obtuse, or right.

obtuse _____   right _____   acute _____

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.

$\frac{6}{10} + \frac{3}{10} = \frac{9}{10}$ common denominator

$2\frac{3}{8} + 1\frac{2}{8} = 3\frac{5}{8}$

$2 \times \frac{1}{9} + \frac{5}{6} =$
$\frac{2}{18} + \frac{15}{18} = \frac{17}{18}$

$2\frac{8}{12} - 1\frac{3}{12} = 1\frac{5}{12}$

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

$3\frac{4}{5} - \frac{1}{4} =$
$3\frac{16}{20} - \frac{5}{20} = 3\frac{11}{20}$

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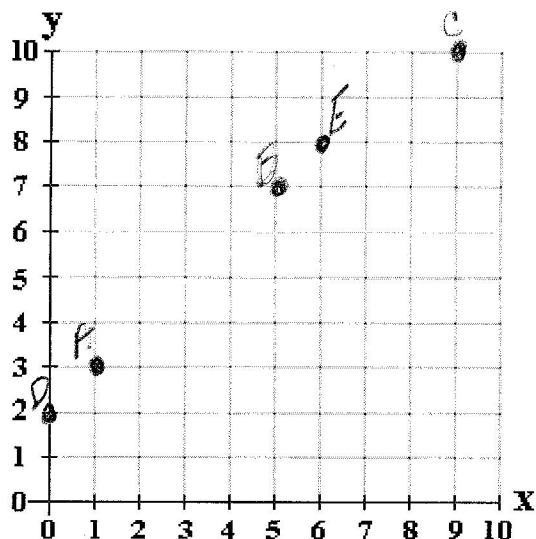
Multiplying Fractions: Multiply the following fractions. Multiply the numerators, then multiply the denominators. Simplify if necessary.

$\frac{3}{4} \times \frac{1}{3} = \frac{3}{12} = \frac{1}{4}$ $\frac{2}{5} \times \frac{5}{8} = \frac{10}{40} = \frac{1}{4}$ $\frac{7}{8} \times 2 = \frac{14}{8} = 1\frac{6}{8} = 1\frac{3}{4}$

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)

Expressions: Rewrite each question as an algebraic expression. Do not solve.

Example: What is 4 more than n? _____ n+4 _____

What is the sum of a and 8? _____ a+8 _____

What is the product of y and 10? _____ 10y _____

What do you get when you subtract 9 from b? _____ b-9 _____

What is c divided by 22? _____ c÷22 _____

What is 12 decreased by p? _____ p-12 _____

Conversions: Convert the following customary units.

4×12=48

4 feet and 3 inches = _____ 51 _____ inches

×12

3 yards = _____ 36 _____ feet

1pt=2cup

1 pint and 1 cup = _____ 3 _____ cups   2cups=1pint

×4

6 gallons = _____ 24 _____ quarts

000lbs=1lb

2 tons = _____ 4,000 _____ pounds   2000lbs=1ton

16oz=1lb

1 pound and 7 ounces = _____ 23 _____ ounces

81 minutes = _____ 1 _____ hours and _____ 21 _____ minutes

×60

2 hours and 38 minutes = _____ 158 _____ minutes

120

6