Summer Work for students entering PreAlgebra

NAME: _____________________________

Last Year’s Teacher/School: ______________________

Instructions: Answer all questions in the space provided. SHOW ALL SUPPORTING WORK as required by the problem. Do your own work, although learning through cooperation with classmates is encouraged. This assignment will be due the first day of school, do not wait to the last minute. This assignment is to help prepare you for PreAlgebra by helping you recall key, foundation topics.

Each problem has a topic resource name which you can use to look up the topic covered. To use the Khan Academy link you must first be a registered user at khanacademy.org (this is free).

1. State the place value of the underlined digit:
   a.) 1,230 __________  b.) 560,043 __________
   c.) 7.842 __________  d.) 0.4905 __________

   Topic Resource: Place Value

2. Round each number to the underlined place value position:
   a.) 54,381 __________  b.) 321,978 __________
   c.) 45,721 __________  d.) 0.058 __________

   Topic Resource: Rounding Decimals

3. Order each set of numbers from least to greatest:
   a.) 0.03, 0.3, 0.003, 3.0 ________________
   b.) 5.23, 5.203, 5.21, 5.3 ________________
   c.) 114.2, 114.02, 114.202, 114.002 ________________

   Topic Resource: Ordering Decimals

4. Complete so the fractions are equivalent:
   a.) \( \frac{3}{5} = \frac{15}{?} \)  
   b.) \( \frac{4}{7} = \frac{42}{?} \)  
   c.) \( \frac{27}{72} = \frac{3}{?} \)

   Topic Resource: Equivalent Fractions
5. Write each fraction in simplest form:
   a.) \( \frac{12}{18} \)  
   b.) \( \frac{10}{25} \)  
   c.) \( \frac{14}{20} \)
   
   Topic Resource: Fractions in Lowest Terms

6. Write each mixed number as an improper fraction:
   a.) \( \frac{3 \frac{4}{5}}{3} \)  
   b.) \( \frac{7 \frac{3}{9}}{9} \)  
   c.) \( \frac{12 \frac{4}{13}}{13} \)

7. Write each improper fraction as a mixed number in simplest form:
   a.) \( \frac{12}{5} \)  
   b.) \( \frac{31}{8} \)  
   c.) \( \frac{30}{12} \)

7 – 8, Topic Resource: Fractions, Improper and Mixed

8. Order the set of fractions from least to greatest:
   \( \frac{2}{3}, \frac{4}{9}, \frac{5}{6}, \frac{7}{12} \)
   
   Topic Resource: Comparing and Ordering Fractions

9. Addition. Show all work:
   a.) \( 463 + 309 + 1542 = \)  
   b.) \( 543 + 9.29 = \)
   c.) \( \frac{5}{12} + \frac{1}{3} = \)  
   d.) \( 12 \frac{1}{2} + 8 \frac{2}{3} = \)

10. Subtraction. Show all work:
    a.) \( 51,520 - 35,630 = \)  
    b.) \( 210 - 56.765 = \)
c.) \( \frac{7}{18} - \frac{1}{6} = \) _____  

d.) \( 23 \frac{1}{2} - 15 \frac{1}{4} = \) _____

9, 10, Topic Resource: Adding and Subtracting Fractions and Decimals

11. Multiplication. Show all work:

a.) \( 7253 \times 38 = \) __________

b.) \( 419 \times 2.3 = \) __________

c.) \( 3.57 \times 0.09 = \) __________

d.) \( 1.36 \times 1000 = \) __________

e.) \( \frac{6}{7} \times \frac{8}{15} = \) __________

f.) \( \frac{2\frac{2}{5}}{1\frac{3}{7}} = \) __________

12. Division. Show all work:

a.) \( 5202 \div 18 = \) __________

b.) \( 5.59 \div 26 = \) __________

c.) \( 13.6 \div 0.003 = \) __________

d.) \( 0.88 \div 1000 = \) __________

e.) \( \frac{9}{7} \div \frac{3}{14} = \) __________

f.) \( \frac{3\frac{1}{4}}{2\frac{1}{3}} = \) __________

Topic Resource: Multiplying and Dividing Fractions and Multiplying and Dividing Decimals

13. Write each fraction or mixed number as a decimal:

a.) \( \frac{3}{8} = \) __________

b.) \( \frac{3}{4} = \) __________
14. Write each decimal as a fraction or mixed number in simplest form:
   a.) $0.8 = \underline{\hspace{2cm}}$  
   b.) $10.05 = \underline{\hspace{2cm}}$

15. Find the value of each expression. (Hint: don’t forget the order of operations, PEMDAS.)
   a.) $8 + 7 + 12 ÷ 4 = \underline{\hspace{2cm}}$
   b.) $30 \cdot (6 - 4) = \underline{\hspace{2cm}}$
   c.) $81 ÷ 27 \times 6 - 2 = \underline{\hspace{2cm}}$
   d.) $75 - 5(2 \cdot 6) = \underline{\hspace{2cm}}$

Topic Resource: Writing Fractions as Decimals

Topic Resource: Writing Decimals as Fractions

Topic Resource: Order of Operations