

## General Education Placement Review

\*Calculators will **NOT** be allowed on any mathematics placement test\*

1.) Round the following number: 1375.6174

- a) ...to the nearest tenth    b) ...to the nearest hundred    c) ...to the whole number    d) ...to the thousandths

2.) Indicate whether the following statements are true or false:

- a)  $(-2)^2 > 3$     b)  $4 \leq -12$     c)  $8.32 < 8.234$     d)  $|-4| \geq 4$   
e)  $3.4000 = 3.4$     f)  $1.88 < \frac{32}{17}$     g)  $\frac{84}{156} > \frac{7}{13}$     h)  $-2^4 > 10$

3.) Find the average of the following sets of numbers:

- a) 64 and 102    b) 33 and 50    c) -13 and 29    d) 17.19 and 45.23    e) 0.67 and 7.89

4.) Evaluate the following fractions:

- a)  $\frac{1}{12} + \frac{5}{12}$     b)  $\frac{2}{3} + \frac{1}{4}$     c)  $\frac{1}{12} + \frac{7}{20}$     d)  $\frac{1}{6} - \frac{1}{7}$     e)  $\frac{19}{15} - \frac{1}{15}$   
f)  $\frac{6}{7} \cdot \frac{7}{9}$     g)  $\frac{8}{17} \cdot \frac{51}{64}$     h)  $\frac{8}{3} \div \frac{5}{6}$     i)  $\frac{7}{8} \div \frac{14}{16}$     j)  $\frac{21}{50} \div \frac{54}{25}$

5.) Perform the indicated operation on the following:

- a)  $8 + (-17)$     b)  $(-15) + 18$     c)  $(-21) - (-12)$     d)  $53 - (-27)$   
e)  $(-11) \cdot (-5)$     f)  $7 \cdot (-13)$     g)  $(-64) \div 4$     h)  $(-54) \div (-9)$   
i)  $4 \div 2 \cdot 6 + 5$     j)  $2^5 - 7 \cdot 6 \div 21 + \sqrt{49}$     k)  $\frac{8-6(8-5)-1(3-9)}{-11-(-7)}$     l)  $\frac{2^3 + \sqrt{-1+5} - (-1)(-3+8)}{(-2)^2 + (-1)^3}$

6.) Perform the indicated operation on the following decimals:

- a)  $0.902 + 0.6$     b)  $23.05 + 0.2841$     c)  $13.057 - 2.18$     d)  $2.03 - 5.326$   
e)  $(2.025) \cdot (2.5)$     f)  $(-0.738) \cdot (4.6)$     g)  $0.003 \div 1.5$     h)  $30 \div 0.025$

7.) Change the following percents to a decimal:

- a)  $17\% = \underline{\hspace{2cm}}$     b)  $362\% = \underline{\hspace{2cm}}$     c)  $8.3\% = \underline{\hspace{2cm}}$

8.) Change the following decimals to a percent:

- a)  $0.6 = \underline{\hspace{2cm}}\%$     b)  $0.046 = \underline{\hspace{2cm}}\%$     c)  $1.3 = \underline{\hspace{2cm}}\%$

9.) Change the following decimals or percents to a fraction in lowest term:

- a)  $40\% = \underline{\hspace{2cm}}$     b)  $0.0425 = \underline{\hspace{2cm}}$     c)  $8.6\% = \underline{\hspace{2cm}}$

10.) Change the following [fractions to a decimal](#):

a)  $\frac{39}{65} =$  \_\_\_\_\_

b)  $\frac{12}{600} =$  \_\_\_\_\_

c)  $\frac{1785}{102} =$  \_\_\_\_\_

11.) Solve the following [equations](#) for the variable  $x$ :

a)  $4x - 7 = 17$

b)  $7x - 9 = 17 + 3x$

c)  $5(x - 2) + 6 = 6 + 7x$

d)  $x - (4x + 1) = 7x + 4$

e)  $\frac{x-3}{6} = 2 - x$

f)  $\frac{3x}{8} - \frac{x+5}{3} = 2$

g)  $3x - 13 = 2(x + y) + 7$

h)  $2(x + 4) = 6y + 16$

12.) Solve the following [proportions](#) for the variable  $x$ .

a)  $\frac{x}{4} = \frac{7}{12}$

b)  $\frac{3}{60} = \frac{5}{4x}$

c)  $\frac{24}{5x} = \frac{3}{\frac{5}{2}}$

d)  $\frac{0.25}{x} = \frac{4.5}{0.5}$

13.) Simplify and solve the following problems:

a) [Evaluate](#):  $\frac{4}{3} - \frac{1}{3n}$ , when  $n = 5$

b) 8 subtracted from the [product](#) of 6 and 10

c) Johnny made a monthly [payment](#) of \$200 for 5 years on a loan. What is the total amount that he paid on the loan?

d) If the five dollar amounts of \$86, \$218, \$43, \$196, and \$72 are shared equally among three individuals, what is the dollar amount [each person should receive](#)?

e) Scott wanted to purchase a car that costs \$27,000. After some haggling, the car dealer agreed to give him a 10% discount on the car. After the discount was applied, Scott decided to pay half of the remaining balance. How much does Scott still owe on the car?

f) There are two items for sale. The [ratio](#) of the first item's price to the second is 5:2. The total price of both items is \$42. What is the price of each item?

g) There are 450 blue marbles in a bowl and 650 red marbles in a barrel. What is the [ratio](#) (in fractional form) of blue marbles to the total number of marbles?

h) What is the [total](#) including tax for a purchase of \$14.00 if sales tax is 7.5%?

i) An item costing \$360.00 was increased in price by 40% on Friday. The item then decreased its price of \$504.00 back to \$360.00 the following week. What is the [percentage](#) of this decrease? [round your answer to the nearest hundredths of a percent]