REFRESHER MATH UNIT C TEST – PRACTICE FORM

Ground Rules for Test Completion

1. Present your work in a neat and organized manner. Use complete sentences whenever you are asked to make a statement.
2. SHOW YOUR WORK: Partial credit will be awarded on the basis of the work shown.
3. Make sure you answer ALL parts of problems.

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1. [6] Fill in the blanks of the fraction/decimal/percent equivalence table at the right. Reduce all fractions to lowest terms.

Fraction	Decimal	Percent
2/5	a)	b)
c)	2.3	d)
e)	f)	35.0%

2. [6] Use sketches to represent each of the following from question 1.
   a. The fraction from 1-e. b. The mixed number from 1-c. c. The percent from 1-b.
3. [12] Use your answers from 1-c and 1-e to answer the following. Give your answers as proper fractions or mixed numbers in lowest terms.
   a. What is the sum of the two numbers?
   b. What is the difference between the two numbers?
   c. What is the product of the two numbers?
   d. What is the quotient of the larger divided by the smaller?
4. [4] Write fractions in lowest terms for each of the *parts* described below.
   a. What fraction of a foot is 4 inches? b. Out of a lot of 1000 main boards, 8 were bad.
5. [3] Give an example of each of the following:
   a. proper fraction b. mixed number c. improper fraction
6. Answer the following questions about decimals.
   a. [3] Convert four hundred eight ten-thousandths to a fraction in lowest terms.
   b. [3] Convert 10,086.846 to a mixed number in lowest terms.
   c. [1] Round 10,086.846 to the nearest hundredth.
   d. [3] Express 10,086.846 in words.
7. [27] Solve or simplify each of the following. For fraction problems, give your answer as a proper fraction or mixed number in lowest terms.

   a. 36% of 1500 = b. $^{3}/_{16} \div 2^{5}/_{8} =$ c. $21 - 18 \div 2 =$

   d. $14.89 * 3.6 =$ e. 19 is what percent of 760? f. $24^{9}/_{16} + 11^{7}/_{10} =$

   g. $7 + 5 \bullet (6 - 3) =$ h. $16^{2}/_{15} - 4^{5}/_{12} =$ i. 84 is 1.2% of what number?

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8. [2] Measure the line at the right to the nearest tenth of a centimeter.

9. [30] **Completely solve any 6** of the following problems using steps (I), (II), and (III) below.
   - I. [1] State what it is you are to find. Give your answer as a complete sentence.
   - II. [3] Solve the problem, showing your work. Be sure to reduce fractions to proper fractions or mixed numbers in lowest terms.
   - III. [1] State the answer in a complete sentence.

Questions 9a through 9d refer to a trip being planned by Tom and Ellen.

a. Tom and Ellen are traveling from Brunswick, Maine to Denver, Colorado to attend the wedding of Tom's sister. They estimate the total distance to be 2,150 miles. How many miles should they average each day to complete the trip in five days?

b. For two weeks prior to their trip Tom and Ellen keep track of the gas mileage of their car. They find that they used 21.5 gallons to go 520.3 miles. To the nearest mile, how far could they go on one tank of gas if their gas tank holds 14 gallons?

c. Tom and Ellen estimate that on average gas will cost $1.35 per gallon for their trip. Use the total distance from problem 9a and the mileage (mpg) you used to find the answer to problem 9b to estimate, to the nearest dollar, how much they should expect to pay for gas on their trip from Brunswick to Denver and back?

d. Ellen noted that the odometer read 36,846 when they left Brunswick and 37,284 when they arrived at their first overnight stop in Allentown, Pennsylvania. To the nearest tenth of a percent, what percent of the trip from Brunswick to Denver have they completed?

e. Larry is planning to buy a used car through a local dealership. The dealership requires a 15% down payment. What is the most expensive used car Larry can buy with a $900 down payment?

f. Alice stops at a store on the way home from work and buys a 2-liter bottle of soda for $1.19 and three candy bars at 75¢ each. How much change should she get from a ten-dollar bill?

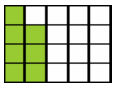
g. A tailor uses $2\frac{1}{2}$ yards of material to make a suit jacket. If he had $9\frac{1}{4}$ yards of material before making the jacket, how much material does he have after making the jacket?

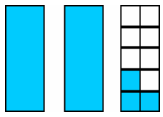
h. How much sales tax do you have to pay on purchases of $285 if the tax rate is 6%?

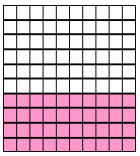
ANSWER KEY

1.

Fraction	Decimal	Percent
2/5	a) **0.4**	b) **40%**
c) **23/10**	2.3	d) **230%**
e) **7/20**	f) **0.35**	35.0%

2a. 

2b. 

2c. 

3a. $2\frac{13}{20}$ 3b. $1\frac{19}{20}$ 3c. $\frac{161}{200}$ 3d. $6\frac{4}{7}$

4a. $\frac{1}{3}$ 4b. $\frac{1}{125}$ 5a. $\frac{S}{B}$ 5b. $W\frac{S}{B}$ 5c. $\frac{B}{S}$ (B: Big, S: Small, W: Whole)

6a. $\frac{51}{1250}$ 6b. $10{,}086\frac{423}{500}$ 6c. 10,086.85

6d. ten thousand eighty-six and eight hundred forty-six thousandths

7a. 540 7b. $\frac{1}{14}$ 7c. 12 7d. 53.604 7e. 2.5% 7f. $36\frac{21}{80}$

7g. 22 7h. $11\frac{43}{60}$ 7i. 7,000 8. 9.4 cm

9a. 430 mi. 9b. 339 mi. 9c. $240 9d. 20.4% 9e. $6,000 9f. $6.56

9g. $6\frac{3}{4}$ yd. 9h. $17.10

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