Math 20 Final Test: Do not write on this sheet. Please write the original problem and show all work carefully on your own paper.

1. Copy the following to your paper and fill in the blanks using the words , factor, difference, quotient, minuend, subtrahend, product, addend, divisor, sum, dividend

$$45 + 5 = 50$$

_____   _____ _____

$$50 - 5 = 45$$

_____   _____ _____

$$50 \div 5 = 10$$

_____   _____ _____

$$10 \text{ x } 5 = 50$$

_____   _____ _____

2.   Perform the necessary operations and show the check of subtraction problems by addition and show the check of division problems by multiplication and adding the remainder.

   a. $34.5 + 6.102$
   b. $412 - 32.9$
   c. $610 \div 11$
   d. $418 \div .7$
   e. $318 - 289$
   f. $51.2 \text{ x } 8$

3. Simplify completely and show every step. Clearly show LCD work on the side.

   a. $\dfrac{5}{6} - \dfrac{2}{15} + \dfrac{3}{5}$
   b. $\dfrac{1}{5} + \dfrac{2}{3}$

4. Use factors to multiply or divide fractions.

   a. $\dfrac{24}{55} \div \dfrac{64}{99}$ and   b. $2\dfrac{1}{22} \div \dfrac{81}{44}$

5. Simplify using order of operations.
   a. $9 + \sqrt{16} \cdot 5$
   b. $20 + 2\left[4^2 - 2\left(6 - 2^2\right)\right]$

6. Simplify using order of operations.
   a. $3^4 \cdot 10 - 2(6)(4)$
   b. $\dfrac{4^2 - 12}{2 \cdot 3 - 4}$

7. Perform the operations:
   a. $\dfrac{0}{8}$
   b. $\dfrac{8}{0}$
   c. $\dfrac{-22}{-22}$
   d. $(-2)(-4)(3)$

8. Convert the following and you can use chart of conversion factors shown on the side.
   a. Convert 2 tons to ounces
   b. Convert 5 yards to inches.

$\dfrac{2000\,\text{lb}}{1\,\text{ton}}$	$\dfrac{16\,\text{oz}}{1\,\text{lb}}$	$\dfrac{3\,\text{ft}}{1\,\text{yd}}$	$\dfrac{12\,\text{in}}{1\,\text{ft}}$

9. Complete the following:
   a. Convert $\dfrac{1}{8}$ to a decimal by dividing.
   b. Write $\dfrac{1}{2}$ as a decimal and a percent.
   c. Percent means parts per _____ . (Please write out entire sentence.)

10. Complete the worded problems and write answers with complete sentences.

   a. Joe bought four pounds of oranges at $2.00 a pound, three boxes of cereal at $3.10, and two pounds of fish at $7.50. What is his total and what is the change if he pays with a fifty dollar bill?

   b. Sally received $563.00 as a gift. She plans to only spend part of it each month. How much will she have each month if she splits the amount evenly over a year? Round to the nearest cent.