

Math 206 - Quiz 1

January 27, 2010

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary. CALCULATORS ARE NOT ALLOWED ON THIS QUIZ.

1. (1 point) Write in expanded form and in standard decimal form: $\frac{37156}{1000}$

$$\frac{30000}{1000} + \frac{7000}{1000} + \frac{100}{1000} + \frac{50}{1000} + \frac{6}{1000}$$

$$3 \times 10 + 7 \times 1 + 1 \times 10^{-1} + 5 \times 10^{-2} + 6 \times 10^{-3}$$

$$37.156$$

2. (1.5 points) Circle the fraction that has a terminating decimal form, and then write that fraction as a decimal number.

$$\frac{81}{7}$$

7 AIN'T 2 & 5's

$$\frac{26}{110} = \frac{13}{55}$$

5-11
AIN'T 2 & 5's

$$\left(\frac{39}{60}\right) = \frac{13}{20} = \frac{13}{2^2 \cdot 5} \cdot \frac{5}{5} = \frac{65}{100} = \underline{\underline{0.65}}$$

THESE MUST REPEAT.

3. (1 point) Billy attempted to find the decimal form of $\frac{11}{17}$ by using his calculator. His calculator told him that

$$11 \div 17 = 0.6470588235.$$

What would you tell Billy if he concluded that $\frac{11}{17} = 0.6470588235$?

$$\frac{11}{17} \text{ IS IN LOWEST TERMS}$$

AND 17 IS PRIME $\Rightarrow \frac{11}{17}$ HAS A REPEATING DECIMAL REPRESENTATION.

Billy's CALCULATOR SOLUTION IS NOT REALLY WRONG,

BUT ITS INCOMPLETE.

4. (1.5 points) Write $3.\overline{615}$ as a fraction in lowest terms.

$$F = 3.615615615\dots$$

$$1000F = 3615.615615\dots$$

$$1000F - F = 3612$$

$$999F = 3612$$

$$F = \frac{3612}{999} = \boxed{\frac{1204}{333}}$$