**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Math 7-4 Period\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Number Systems Review**

**Rational Numbers:** Label each of the following as rational or irrational and explain why.

**1)** 4.3232… **2)** 0.000004 **3)**  $\frac{5}{7}$

**4)**  -6.0916…. **5)** $ \frac{2}{11}$ **6)**  -0.7

**Conversions:** Convert the following fractions to decimals. Round to the nearest hundredth.

**1)**  $\frac{9}{10}$ **2)** $\frac{4}{9}$ **3)** $2\frac{5}{8}$

**Conversions:** Convert the following decimals to fractions in simplest form.

**1)** 0.123 **2)**  0.15  **3)** 3.4

**4)** If I want everyone to eat twenty-five thousandths of a pizza, how many slices of pizza should I cut?

**LCM and GCF:** Find the LCM or GCF of each of the following sets of numbers.

**1)** LCM( 4,7) **2)** GCF(9,12) **3)** LCM( 10, 35)

**Factoring:** Rewrite the following expressions using the GCF.

**1)** 3x + 15xy **2)** 2k + 8km + 16kmn **3)** 12a - 36

**Comparisons:** Compare each pair of numbers using >, <, or =.

**1)** $\frac{8}{10}$ \_\_\_\_\_ $\frac{3}{5}$ **2)** 0.74**\_\_\_\_\_** $\frac{1}{8}$ **3)** $\frac{3}{16}$ \_\_\_\_\_ 0.2

**Adding/Subtracting Fractions:** Calculate the following sums and differences. Write answers in simplest form.

**1)** $\frac{3}{5}$ + $\frac{3}{5}$ **2)** $\frac{4}{7}$ - $\frac{1}{4}$ **3)** 2 $\frac{1}{3}$ - $\frac{4}{6}$

**Multiplying Fractions:** Calculate the following products. Write answers in simplest form.

**1)**  $\frac{5}{12}$ • $\frac{3}{5}$ **2)** 1$\frac{2}{9}$ • $\frac{2}{3}$ **3)** $\frac{1}{4}$ • 3 $\frac{1}{2}$

**Dividing Fractions:** Calculate the following quotients. Write answers in simplest form.

**1)**  $\frac{3}{7}$ ÷ $\frac{1}{4}$ **2)** 4 $\frac{2}{5}$ ÷ $\frac{2}{3}$ **3)** 2$\frac{1}{4}$ ÷ 1 $\frac{1}{2}$

**Fractions and Decimals:** Simplify the following expressions using all fractions or all decimals. Round to the nearest tenth if necessary.

**1)**  $\frac{3}{5}$ + 0.26 **2)** 5.2 • $\frac{2}{3}$ **3)** 9.63÷ (5 $\frac{1}{2}$ **-**3.2)

**Integers:** Simplify the following expressions using the rules for positive and negative number operations.

**1)** – 6 + -7 = \_\_\_\_\_ **2)** – 12 + 9 = \_\_\_\_\_ **3)** 4 - 15 = \_\_\_\_\_

**4)** -3 – (-2) = \_\_\_\_\_ **5) -**15 - 7 = \_\_\_\_\_ **6)** 3 + -56= \_\_\_\_\_

**7)** (-3)(-12) = \_\_\_\_\_ **8)** (7)(-2)= \_\_\_\_\_ **9)** -48 ÷ 8 = \_\_\_\_\_

**10)** Mt. Everest, the highest elevation in Asia, is 29,028 feet above sea level. The Dead Sea, the lowest elevation, is 1,312 feet below sea level. What is the difference between these two elevations?

**11)** A submarine was situated 450 feet below sea level. If it descends 300 feet, what is its new position?