

Name: _____

Math 1120

Fractions and Arithmetic

Spring 2011

In this worksheet, the goal is to perform some arithmetic with fractions and exponents.

1. A class consists of $\frac{2}{5}$ freshmen, $\frac{1}{4}$ sophomores, and $\frac{1}{10}$ juniors; the rest are seniors. What fraction of the class is seniors? (Explain briefly how you reached your answer.)

2. Change each of the following fractions to mixed numbers.

(a) $\frac{14}{5}$

(b) $-\frac{47}{8}$

3. Approximate the following sum.

$$\frac{7}{15} + \frac{28}{9} + 3\frac{9}{17} + \frac{23}{12}$$

4. Approximate the following product.

$$5\frac{4}{5} \cdot 3\frac{1}{10}$$

5. If a and b are rational numbers, with $a \neq 0$ and $b \neq 0$, and if m and n are integers, which of the following are true and which are false? Justify your answers.

(a) $(a + b)^m = a^m + b^m$

(b) $(ab)^0 = 1$

(c) $a^m \cdot a^m \cdot a^n = a^{2m+n}$