Title: Introduction to Fractions	**Course Level:** Math 4
Completion Time: 10 minutes	**Keywords:** Fraction, denominator, numerator, proper fraction, improper fraction
Purpose: To supplement lecture/material of introductory level of fractions. Doesn't include simplifying fractions.	**Author:** Peter Rojas

Definition of a Fraction

A **fraction** is a way of comparing two quantities as a ratio by placing one quantity over another, separated by a horizontal bar. The top quantity, called the **numerator**, may also be thought of as a part of the bottom quantity, called the **denominator**.

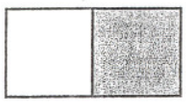
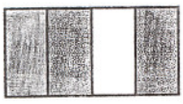
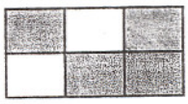
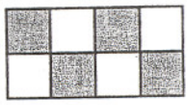
1) For each fraction, identify the numerator, *N*, and the denominator, *D*.

a) $\frac{5}{6}$ b) $\frac{9}{4}$ c) $\frac{3x}{7}$ d) $\frac{8}{6y}$

N _____ *N* _____ *N* _____ *N* _____

D _____ *D* _____ *D* _____ *D* _____

2) For each figure, use a fraction to expresses the number of shaded regions as a part of the total number of regions.

a) _____ b) _____ c) _____ d) _____

3) **Take a guess:** What fraction is equivalent to the number 9? _____;

the number −3? _____; the number 0? _____

NOTE: Any number that is an integer may be expressed as a fraction by placing it over a denominator of "1".

Types of Fractions

A **proper fraction** is a fraction in which the numerator is less than its numerator.

Proper fraction examples: $\frac{2}{3}$ *and* $-\frac{1}{8}$

An **improper fraction** is a fraction in which the numerator is greater than, or equal to its denominator.

Improper fraction examples: $-\frac{4}{4}$ *and* $\frac{5}{2}$

NOTE: The sign of a fraction is NOT used when classifying it as proper or improper.

4) Circle the *proper* fractions in the set of fractions: $\frac{1}{6}$ $\frac{3}{3}$ $\frac{18}{11}$ $-\frac{5}{12}$ $\frac{0}{5}$

5) Circle the *improper* fractions in the set of fractions: $\frac{7}{7}$ $\frac{8}{13}$ 9 $-\frac{15}{12}$ $\frac{3}{4}$