

Pre-Algebra

**Fraction Review: Equivalent Fractions,
Mixed Numbers and Improper Fractions**

Name: _____

Date: _____ Hour: _____

Making Equivalent Fractions

To make equivalent fractions, multiply OR divide the numerator and denominator by the SAME number.

Example 1:

$$\frac{3 \times 4}{4 \times 4} = \frac{12}{16}$$

Example 2:

$$\frac{1}{1} = \frac{6}{36} \rightarrow \frac{6 \div 6}{36 \div 6} = \frac{1}{6}$$

Mixed Numbers to Improper Fractions

- Step 1:** Multiply the whole number and the denominator.
- Step 2:** Add the numerator to the answer from Step 1. This number becomes the new numerator.
- Step 3:** Keep the denominator the same as the original fraction.

Example 1:

$$5 \frac{7}{12} = 5 \times 12 = 60 + 7 = \boxed{\frac{67}{12}}$$

Example 2:

$$10 \frac{1}{8} = 10 \times 8 = 80 + 1 = \boxed{\frac{81}{8}}$$

Improper Fractions to Mixed Numbers

- Step 1:** Divide the numerator by the denominator using long division.
- Step 2:** Your answer becomes the whole number.
- Step 3:** The remainder becomes the numerator in the mixed number.
- Step 4:** The denominator stays the same as the original fraction.
- Step 5:** If possible, reduce/simplify the fraction.

Example 1:

$$\frac{15}{9} = 9 \overline{)15} \begin{array}{r} 1 \text{ R}6 \\ -9 \\ \hline 6 \end{array} \quad \left| \begin{array}{l} 6 \div 3 = 2 \\ 9 \div 3 = 3 \end{array} \right.$$

$$= \boxed{1 \frac{2}{3}}$$

Example 2:

$$\frac{84}{7} = 7 \overline{)84} \begin{array}{r} 12 \\ -7 \\ \hline 14 \\ -14 \\ \hline 0 \end{array} \quad \boxed{= 12}$$