Comparing and Ordering Fractions and Decimals

Any fraction greater than 1 can be written as a mixed number.

Example 1: Convert $6\frac{3}{4}$ to an improper fraction.

We can use equivalent fractions and place value to order fractions and decimals.

Example 2: Write these numbers in order from least to greatest: $\frac{11}{8}$, $\frac{7}{4}$, $1\frac{1}{4}$, 0.75

Method 1: Use Equivalent Fractions

Step 1: Write each fraction, mixed number, and decimal so that they have a common denominator.

Step 2: Compare the numerators and then order the numbers accordingly.

Method 2: Use Place Values

Step 1: Write each number as a decimal.

Step 2: Write each decimal in a place-value chart.

Step 3: Compare the decimal places, starting with the largest to the smallest, to determine the order.

We can verify both methods using a number line.

Method 1:   **Method 2:**

Example 3: Write a fraction between $\frac{9}{8}$ **and** $1\frac{1}{4}$.

Step 1: Write each fraction, mixed number, or decimal so that they have a common denominator.

Notice that the numerators are consecutive whole numbers meaning that there are no whole numbers between 9 and 10. So, we have to multiply the numerator and denominator of both fractions by the same number (2 is the easiest) to get equivalent fractions.

Step 2: Create equivalent fractions for each fraction. Compare the numerators and find a number that is between the two numerators.