Mixed Numbers and Improper Fractions

A proper fraction is a fraction whose numerator is less than its denominator.
\[ \frac{2}{3}, \frac{1}{4}, \text{ and } \frac{2}{7} \]
are examples of proper fractions.

An improper fraction is a fraction whose numerator is greater than or equal to its denominator.
\[ \frac{3}{2}, \frac{8}{3}, \text{ and } \frac{5}{5} \]
are examples of improper fractions.

Some improper fractions can be written as mixed numbers.

To write \( \frac{7}{4} \) as a mixed number, draw circles divided into \( \frac{1}{4} \) sections.

Then shade in 7 of the \( \frac{1}{4} \) sections.

There is one circle and \( \frac{3}{4} \) of a circle shaded.

So, \( \frac{7}{4} = 1\frac{3}{4} \).

Write each improper fraction as a mixed number.

1. \( \frac{14}{3} \)
2. \( \frac{11}{2} \)
3. \( \frac{15}{4} \)
4. \( \frac{19}{6} \)

Mixed numbers can be written as improper fractions.

To write \( 2\frac{1}{3} \) as an improper fraction, draw 3 circles. Divide each circle into \( \frac{1}{3} \) sections. Next, shade in 2 whole circles and one \( \frac{1}{3} \) section of the last circle.

Then find the total number of \( \frac{1}{3} \) sections that are shaded.

Seven \( \frac{1}{3} \) sections are shaded, so \( 2\frac{1}{3} = \frac{7}{3} \).

Write each mixed number as an improper fraction.

5. \( 3\frac{1}{4} \)
6. \( 5\frac{2}{3} \)
7. \( 4\frac{1}{2} \)
8. \( 1\frac{5}{6} \)