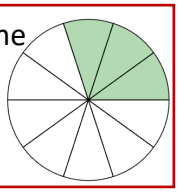
Topic #

Improper Fractions and Mixed Numbers

Date

Warmup: Answer the warmup questions **before** watching the video solutions.

1. What part of the circle is shaded?



2. What part of the rectangle is shaded?

3. Determine the numerator of each fraction that results in true statements.

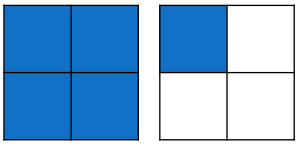
$\frac{\quad}{9} = 1$ $\frac{\quad}{3} = 1$ $\frac{\quad}{15} = 1$ $\frac{\quad}{18} = 1$

I. Improper Fractions and Mixed Numbers

Improper Fraction:

An improper fraction is a fraction that has a numerator larger than the denominator.

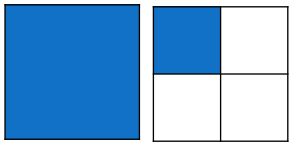
Example: $\frac{5}{4}$



Mixed Number:

A mixed number is a whole number and a proper fraction (the numerator is less than the denominator).

Example: $1\frac{1}{4}$



Determine if each number is a proper fraction, an Improper Fraction or a Mixed Number.

$3\frac{1}{2}$ _____

$\frac{81}{54}$ _____

$\frac{86}{95}$ _____

4. Determine if each number is an Improper Fraction or a Mixed Number. (circle the answers)

$\frac{15}{2}$: *improper Fraction or Mixed Number*

$5\frac{1}{4}$: *improper Fraction or Mixed Number*

$\frac{7}{3}$: *improper Fraction or Mixed Number*

5. Determine if each number is a Proper or an Improper Fraction. (circle the answers)

$\frac{2}{7}$: *Proper or improper*

$\frac{4}{6}$: *Proper or improper*

$\frac{10}{9}$: *Proper or improper*

II. Convert Improper Fractions to Mixed Numbers

Convert Improper Fractions to Mixed Numbers:

Divide the denominator into the numerator.
The remainder is the numerator
Keep the denominator

Write $\frac{53}{8}$ in simplest form.

$53 \div 8 = 6$

The remainder is 5

$\frac{52}{8} = 6\frac{5}{8}$

$$8 \overline{)\,53} \quad 6 \text{ r } 5$$

Convert the improper fractions to a mixed numbers.
(If the answer is a whole number use a "0" in the numerator)

$\frac{12}{15}$ $\frac{8}{13}$ $\frac{18}{4}$ $5\frac{3}{5}$ $2\frac{28}{25}$ $45\frac{4}{3}$ $\frac{12}{6}$

6. Write the improper fraction $\frac{18}{11}$ as a mixed number.

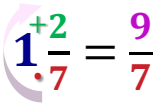
7. Write the improper fraction $\frac{25}{5}$ as a mixed number.

III. Convert Improper Fractions to Mixed Numbers

Convert Mixed Numbers to improper Fractions:

To calculate the numerator:

1. Multiplying the denominator by the whole number
2. Add the numerator to the product
3. Keep the denominator



Write the mixed numbers as improper fractions.

$5\frac{8}{15}$	$9\frac{4}{9}$
8. $11\frac{1}{3}$	**9.** $10\frac{3}{4}$

IV. Writing Fractions and Mixed Numbers in Simplest Form

Simplest Form: Fractions and Mixed Numbers are in Simplest form when the numerator is less than the denominator and the GCF of the fraction is 1.

To determine the fraction is in simplest form:

1. **Is the numerator less than the denominator?** If not, change the improper fraction to a mixed number.
2. **Is the GCF of the numerator and denominator equal to 1?** If not, Use the GCF to reduce the fraction.

Circle the numbers that are in simplest form.

$\frac{12}{15}$ $\frac{8}{13}$ $\frac{18}{4}$ $5\frac{3}{5}$ $2\frac{28}{25}$ $45\frac{4}{3}$

Write $\frac{50}{120}$ in simplest form.

Write the numbers in simplest form

$\frac{38}{12}$	$4\frac{8}{12}$	**10.** $\frac{30}{42}$	**11.** Write $\frac{18}{12}$ as a mixed number in simplest form.

V. Practice: