NAME: _____

DATE: _____

BLOCK: _____

Lesson 10 – Converting & Simplifying/Reducing Fractions

3 Types of Fractions:

Proper Fractions = the numerator is smaller than the denominator

Examples: $\frac{5}{6}$ $\frac{2}{3}$ $\frac{1}{1000}$ $\frac{4}{27}$

Improper Fractions = the numerator is bigger than or equals to the denominator

Examples: $\frac{10}{3}$ $\frac{8}{8}$ $\frac{25}{5}$

Mixed Numbers = there is a whole number and a fraction together

Examples: $2\frac{2}{3}$ $18\frac{1}{8}$ $9\frac{5}{7}$

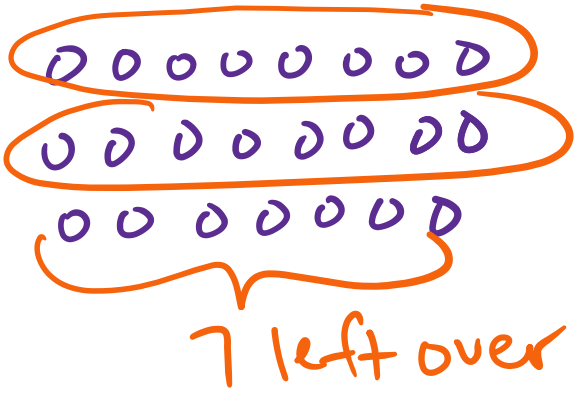
How to convert an IMPROPER FRACTION to a MIXED NUMBER:

- Divide the **numerator** by the **denominator**
- Ask yourself, "how many times does the denominator go into the numerator? What remainder do I have left over?"
- Always convert improper fractions to mixed numbers!

Example: Convert the improper fraction, $\frac{23}{8}$ to a mixed number

$$8\overline{)23} \quad 2 \text{ r } 7$$
$$-16$$
$$7$$

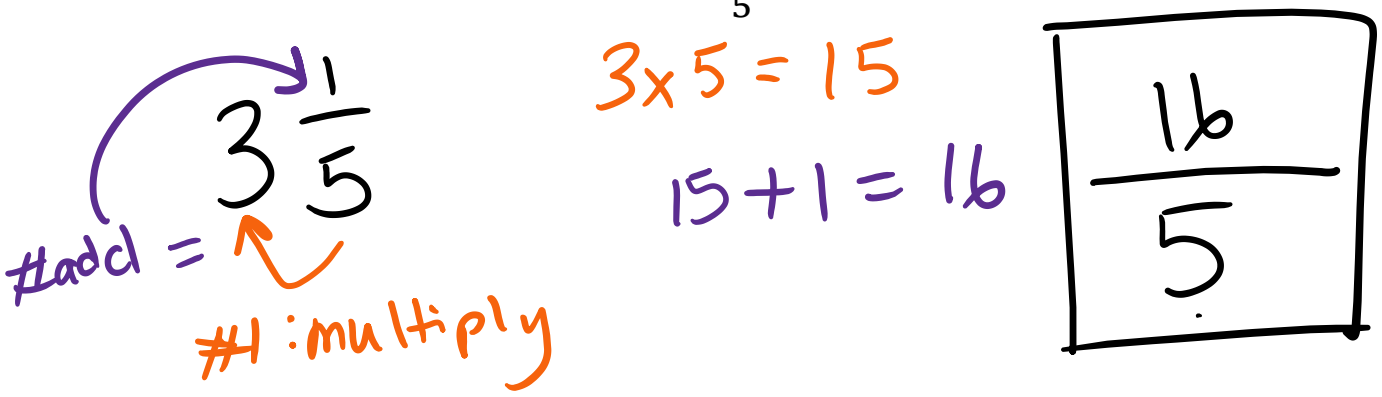
$2\frac{7}{8}$



How to convert a MIXED NUMBER to an IMPROPER FRACTION:

- First multiply and then add

Example: Convert the mixed number, $3\frac{1}{5}$ to an improper fraction



How to SIMPLIFY/REDUCING fractions:

- We always want fractions to be in their simplest or smallest form

Example: $\frac{4 \div 2}{8 \div 2} = \frac{2 \div 2}{4 \div 2} = \boxed{\frac{1}{2}}$

- Simplify by **dividing** the **numerator** and the **denominator** by the **greatest common factor** (GCF) *the biggest number that can be divided into both the numerator and the denominator*

Example: simplify or reduce $\frac{6}{10}$

$\frac{6 \div 2}{10 \div 2} = \boxed{\frac{3}{5}}$

Example: simplify or reduce $\frac{20}{8}$

$$\frac{20}{8} \overset{\div 4}{\underset{\div 4}{}} = \frac{5}{2} = \boxed{2\frac{1}{2}}$$

$$2\overline{)5} \quad 2 \text{ r } 1$$

$$\underline{-4}$$

$$1$$