Fraction Anchor Charts

Simplifying Fractions:

When you are asked to simplify a fraction that means to write it in lowest terms. So think of making the fraction as small as you possibly can.

If a question asks you to simplify $\frac{5}{15}$, follow the steps below:

1. Find the factors of 5 and 15.

$$5\ (1, 5) \qquad 15\ (1, 3, 5, 15)$$

That means the greatest common factor (GCF) or highest number they share in common is 5.

2. Now you can divide the numerator (the number on top) and the denominator (number on the bottom) by the GCF.

$$\frac{5}{15} \begin{array}{l} \div\, 5 = 1 \\ \div\, 5 = 3 \end{array}$$

3. When simplified, $\frac{5}{15} = \frac{1}{3}$.

Equivalent Fractions:

Equivalent is another word for equal. So if you are ever asked to find equivalent fractions, you are really just being asked to find fractions that are the same amount.

Just like 4 + 6 = 5 + 5, fractions can be equivalent.

Let's work through an example together. Find three equivalent fractions for $\frac{5}{8}$.

1. The first step in finding equivalent fractions is determining whether or not $\frac{5}{8}$. Is written in simplest terms.. Refer back to the steps on the previous page to determine if $\frac{5}{8}$. Is simplified.

$$5\ (1, 5) \qquad 8\ (1, 2, 4, 8)$$

The GCF of 5 and 8 is 1 so therefore, $\frac{5}{8}$. Is already written in simplest terms

2. Since we have ruled out simplifying or reducing the fraction, we now need to increase the fraction or in other words, multiply.

Keep in mind that the most important rule when it comes to fractions is: WHATEVER YOU DO TO THE BOTTOM NUMBER (denominator), YOU MUST DO TO THE TOP NUMBER (numerator) AND VICE VERSA.
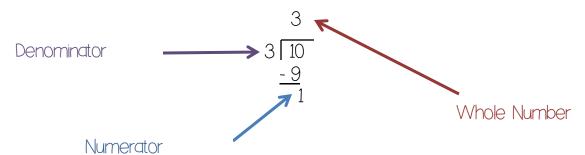
$$\frac{5}{8} \times \frac{2}{2} = \frac{10}{16} \qquad\qquad \frac{5}{8} \times \frac{3}{3} = \frac{15}{24}$$

$$\text{Therefore, we can say that } \frac{5}{8} = \frac{10}{16} = \frac{15}{24}.$$

Changing an Improper Fraction to a Mixed Number:

Fractions do not always come in proper form. Sometimes they come as an improper fraction. An improper fraction is a fraction in which the numerator is larger than the denominator. If this happens and the question asks you to simplify, then you must change it to a mixed number. Follow the example below for the process.

1. The question you have answered leaves you with $\frac{10}{3}$ but you must write it in simplest form. Start by dividing 10 by 3.

Denominator $\longrightarrow$ $3\overline{)10}$ — Whole Number
$$\underline{-9}$$
$$1$$ — Numerator

Therefore $\frac{10}{3}$ can be written as or is equivalent to $3\frac{1}{3}$.

Changing a Mixed Number to an Improper Fraction:

It is important to know how to convert a mixed number to an improper fraction. The process is very similar to that of changing an improper fraction to a mixed number.

1. To change $4\frac{3}{4}$ to an improper fraction, first multiply the whole number by the denominator.

$$4 \times 4 = 16$$

2. Then add the numerator to the product.

$$16 + 3 = 19$$

3. It is important to remember that the denominator always stays the same. Don't forget!

So $4\frac{3}{4}$ is equal to $\frac{19}{4}$.

Created by trueblueteacher