Name: Grade:

MEASUREMENT & NUMERACY

FRACTIONS

But what are Fractions???

A **fraction** is a part of a whole number, and a way to split up a number into equal parts. It is written as the number of equal parts being counted, called the numerator, over the number of parts in the whole, called the denominator. These numbers are separated by a line

The ***bottom number*** is called the **DENOMINATOR.**

It tells us how many parts the whole consists of.

$$\frac{3}{4}$$

The ***top number*** is called the **NUMERATOR.**

It tells us how many parts out of the whole are used.

Fractions don't always follow the same rules in woodworking. For instance the units of measurement are specific to the break down of an inch. Units will normally be in:

$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{16}$	and occasionally $\frac{1}{32}$

Simplifying Fractions

Each sub-division is half of the previous one, as the measurement unit gets *smaller* the denominator gets **larger** *(doubles)* so…

- if *half* of **1"** is **1/2"** and *half* of that is **1/4"**then *half* of that is _____**"** and *half* of that is _____**"**

When reading a measurement determine the value of each unit, **count** the lines then *reduce* the fraction to its lowest form.

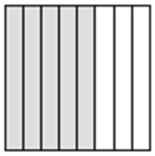
- if the *units* are in **1/8"** of an inch increments and *6* out of *8 lines* are covered then our measurement is **6/8".**

When using a ruler, you can only ***reduce*** or ***add*** fractions when **both** the numerator and the denominator are **even** so… 6/8" can be reduced *(both halved)* to _____**".** We *can't* reduce any further because one of our numbers is no longer even so this is the simplest/lowest form. If we wanted to add 3/8" with 1/4" we would have to make the denominators the same. We can't halve 3/8" because both the numerator and the denominator are not even so we must double 1/4" to make them like units. So our question ends up looking like:

3/8" + 2/8" = _____"

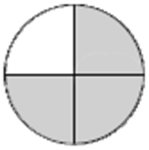
(which is the same thing just written differently).

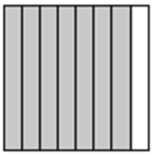
Creating Fractions:

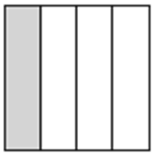
1) 

2) 

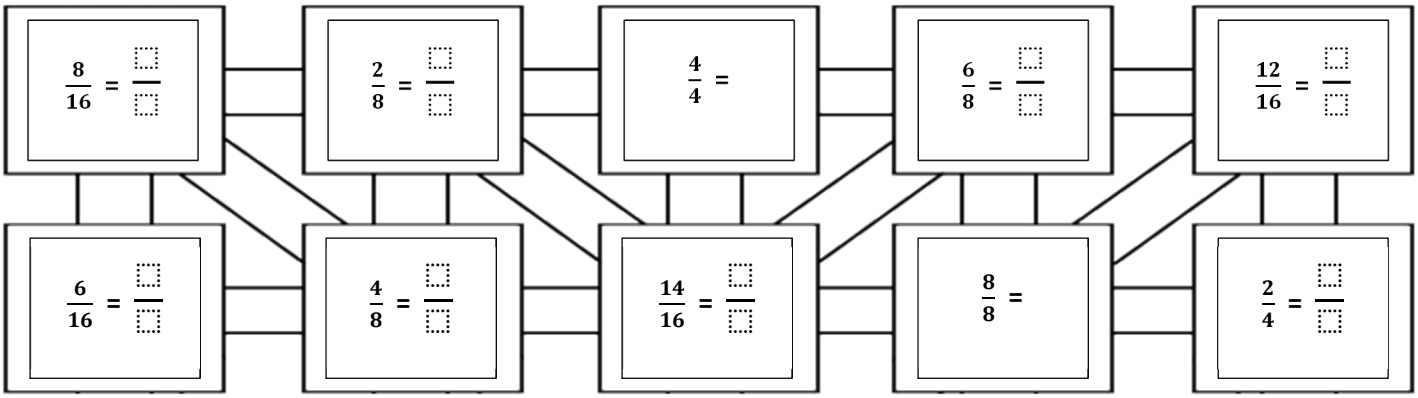
3) 

4) 

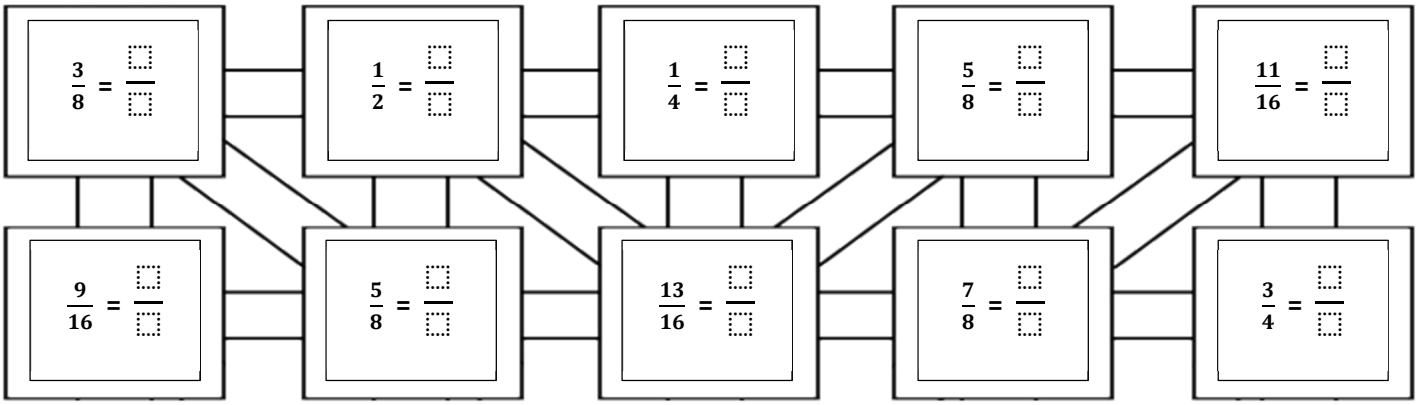
5) 

6) 

Simplified or Equivalent Fractions:



Finding half:



Solving Fractions: