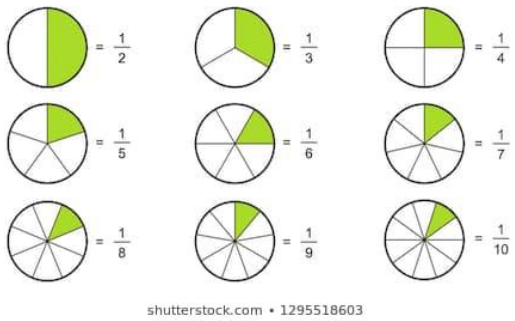
Fractions

Fractions are used when we need to break down standard measuring and units into smaller parts. Fractions are used in many different trades and technical areas. Unfortunately math involving fractions must be done with pencil and paper as not all calculators can handle fractions.

Fraction are made up of a numerator and a denominator.

Numerator: this is the upper number of a fraction and represents the number of parts that we have.

Denominator: this is the bottom number of a fraction and it represents the total number of parts in total.



Proper Fraction

- a number less than one as you would expect a fraction to be.

- for a proper fraction the numerator is less than the denominator.

- the top number is smaller than the botton number.

Example: $\frac{1}{2}$ $\frac{3}{5}$ $\frac{7}{16}$ $\frac{10}{25}$ $\frac{82}{97}$

Improper Fraction

- a number greater than one.

- the numerator is larger than the denominator.

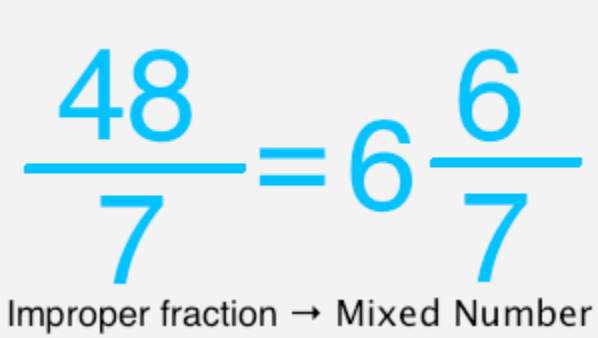
- the top number is bigger than the bottom number.

Example: $\frac{5}{2}$ $\frac{8}{5}$ $\frac{45}{16}$ $\frac{37}{25}$ $\frac{99}{97}$

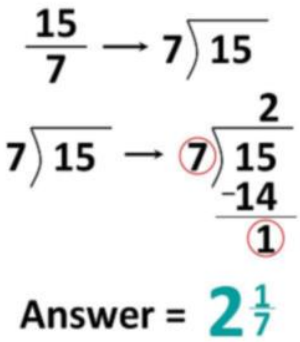
Do questions 1, 3, 5, 7 from Part A of the worksheet.

Mixed Numbers

- an improper fraction written as the sum of a whole number and a proper fraction.



Example of an improper fraction to a mixed number:

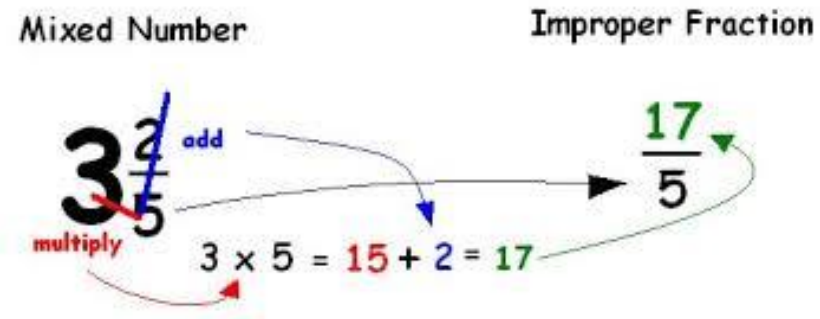


A mixed number can also be written as an improper fraction.

1. multiply the whole number by the denominator.

2. add the numerator to your answer from step.

3. write the improper fraction with you answer from step 2 as the numerator and keep the original denominator.

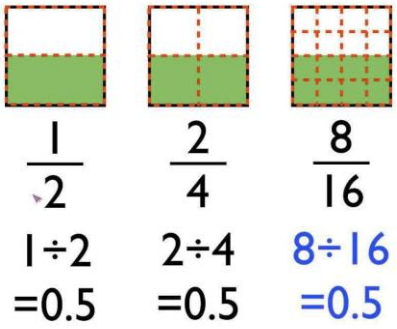


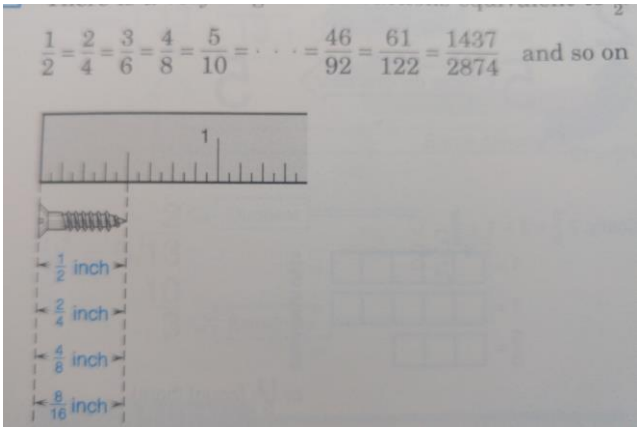
Practice

Do questions 2, 4, 6, 8 from Part B of the worksheet.

Equivalent Fractions

- two fractions are said to be equivalent if they represent the same number.

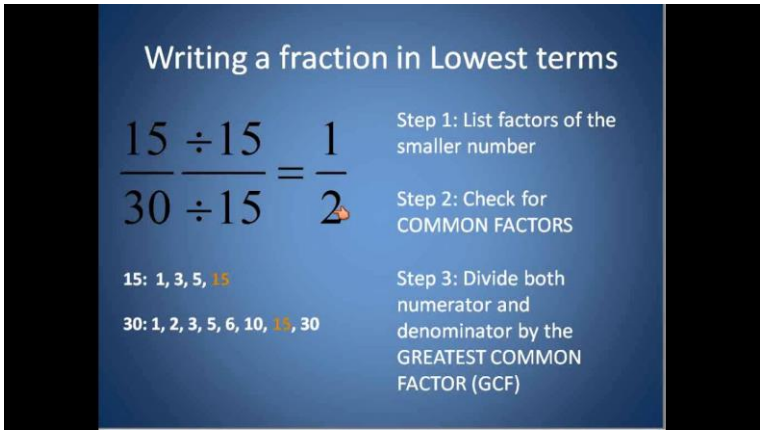


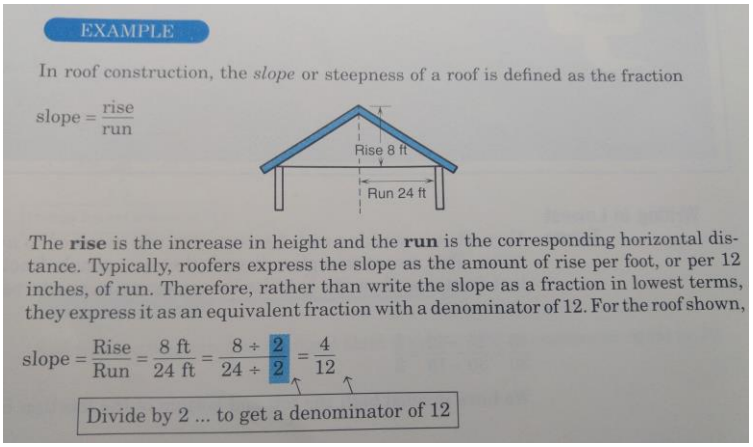


Writing in lowest terms

Very often in working with fractions you will be asked to **write a fraction in lowest terms**. This means to replace it with the most simple fraction in its set of equivalent fractions.

- find the largest number that will divide into both parts of the fraction.



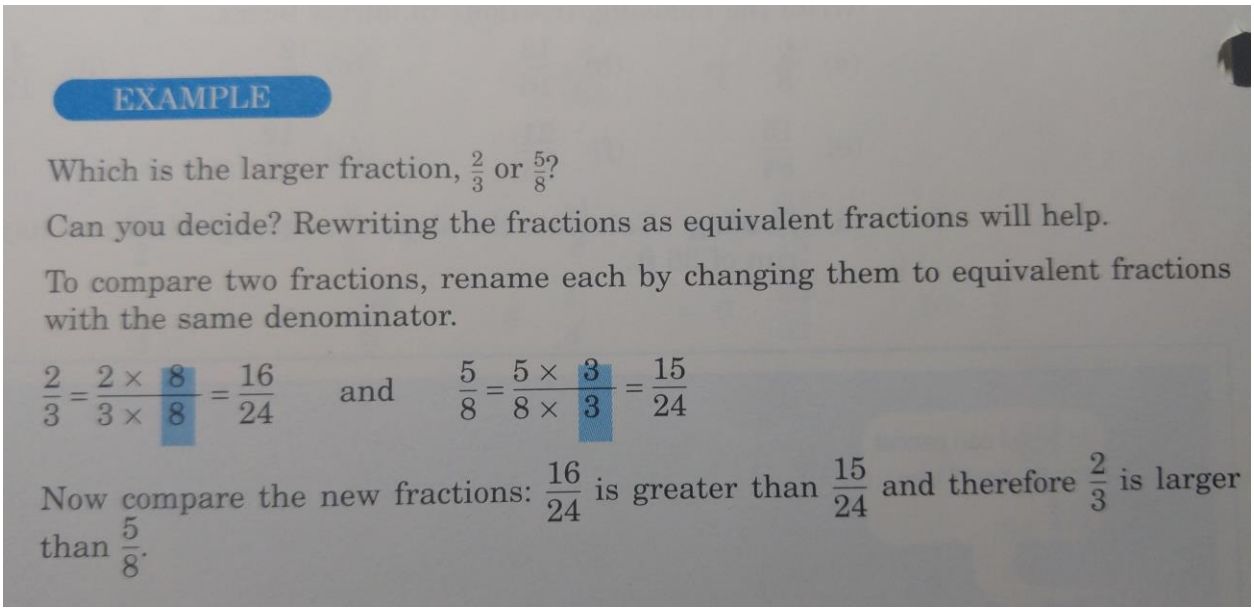


Practice

Do questions 3, 6, 9, 12 from Part C of the work sheet.

Comparing Fractions

If offered $\frac{2}{3}$ of a certain amount of money and $\frac{5}{8}$ of it, which would you choose?



EXAMPLE

Which is the larger fraction, $\frac{2}{3}$ or $\frac{5}{8}$?

Can you decide? Rewriting the fractions as equivalent fractions will help.

To compare two fractions, rename each by changing them to equivalent fractions with the same denominator.

$\frac{2}{3} = \frac{2 \times 8}{3 \times 8} = \frac{16}{24}$ and $\frac{5}{8} = \frac{5 \times 3}{8 \times 3} = \frac{15}{24}$

Now compare the new fractions: $\frac{16}{24}$ is greater than $\frac{15}{24}$ and therefore $\frac{2}{3}$ is larger than $\frac{5}{8}$.

Practice

Do questions 1 to 6 from Part E of the worksheet.

Please complete the following and email to me:

Part A – 2 and 4

Part B – 9 and 10

Part C – 7 and 13

Part D – 1 and 6

Part E – 8 and 10

Part F – 1, 2, 4, 5, and 10