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Worksheet(2020 – 2021)

Class: VII
Subject: Mathematics

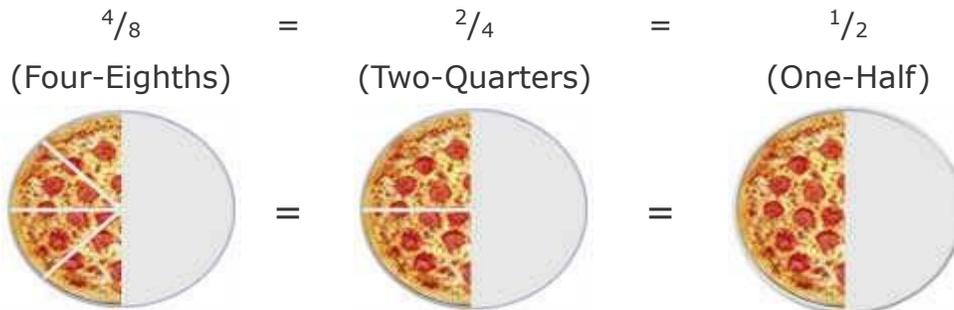
Name: _____

Class / Section: _____

Date: 22/04/2020

Equivalent Fractions

Some fractions may look different, but are really the same, for example:



It is usually best to show an answer using the simplest fraction ($\frac{1}{2}$ in this case). That is called *Simplifying*, or *Reducing* the Fraction

- You can make equivalent fractions by multiplying or dividing **both top and bottom** by the same amount.
- You only multiply or divide, **never add or subtract**, to get an equivalent fraction.

For example: Write three equivalent fraction of $\frac{3}{5}$.

Equivalent fractions of $\frac{3}{5}$ are:

$$(3 \times 2)/(5 \times 2) = \frac{6}{10},$$

$$(3 \times 3)/(5 \times 3) = \frac{9}{15},$$

$$(3 \times 4)/(5 \times 4) = \frac{12}{20}$$

Therefore, equivalent fractions of $\frac{3}{5}$ are $\frac{6}{10}$, $\frac{9}{15}$ and $\frac{12}{20}$.

Simplest Form: In order to reduce a fraction to its lowest terms the following steps are:

Step I: Find the HCF (highest common factor) of the numerator (top number) and denominator (bottom number).

Step II: Divide both the numerator and denominator by HCF (highest common factor) obtained in step I to get the equivalent fraction in the lowest terms or in the simplest form.

For Example:

1. Reduce each of the following fractions in lowest term:

(i) $\frac{15}{35}$

The factors of 15 are 1, 3, 5 and 15.

The factors of 35 are 1, 5, 7 and 35.

The common factors of 15 and 35 are 1 and 5.

Therefore, HCF (highest common factor) of 15 and 35 is 5.

Now, $\frac{15}{35} = \frac{(15 \div 5)}{(35 \div 5)}$

[Dividing numerator and denominator by the HCF (highest common factor) of 15 and 35 is 5].

$= \frac{3}{7}$.

Assignment

Q.1 Write three equivalent fraction of : a) $\frac{2}{3}$ b) $\frac{2}{15}$

Q.2 Reduce each of the following fractions in lowest term:

a) $\frac{126}{90}$

b) $\frac{48}{60}$

Q3. Is $\frac{169}{289}$ in its simplest form?

N.B.- This sheet is prepared from home.