

Vocab :

fraction - a part of a whole

rational number - whole #, fractions,
decimals

numerator - top # of a fraction (the part)

denominator - bottom # of a fraction (whole)

improper fraction - the numerator is greater than denominator

mixed number - combination of a whole # and a frac. (> 1)

equivalent - equal

simplify - when the GCF for the numer. & den. is 1

Put in simplest form.

$$1) \frac{14}{20} = \frac{7}{10}$$

$$2) \frac{45}{48} = \frac{15}{16}$$

$$3) \frac{10}{40} = \frac{1}{4}$$

$$\frac{14 \div 2}{20 \div 2} = \frac{7}{10}$$

$$3 \overline{) \frac{45}{15} \frac{48}{16}}$$

$$2 \overline{) \frac{10}{5} \frac{40}{20}}$$
$$1 \quad 4$$

$$2 \overline{) \frac{14}{7} \frac{20}{10}}$$

← Simplified
frac.

$$\frac{10}{40}$$

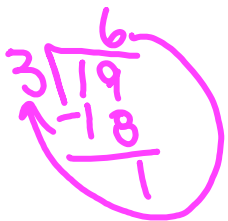
Change to improper frac.

$$1) 5\frac{1}{3} = \frac{16}{3} \quad 2) 9\frac{7}{8} = \frac{79}{8} \quad 3) 12\frac{4}{7} = \frac{88}{7}$$

$$4) 4\frac{5}{6} = \frac{29}{6}$$

Change to mixed #.

$$1) \frac{19}{3} = 6\frac{1}{3} \quad 2) \frac{23}{6} = 3\frac{5}{6} \quad 3) \frac{48}{11} = 4\frac{4}{11}$$


$$\begin{array}{r} 3 \overline{) 19} \\ \underline{18} \\ 1 \end{array}$$

+/- w/same den.

$$1.) \frac{11}{12} - \frac{7}{12} = \frac{4}{12} = \boxed{\frac{1}{3}}$$

ok bec
gcd of
2 + 3 = 1

$\frac{1}{2}$ is ok too
but not
always best
answer

$$2.) \frac{11}{16} + \frac{13}{16} = \frac{24}{16} = \boxed{\frac{3}{2}}$$

$$\begin{array}{r} 2 \overline{) 24 \ 16} \\ \underline{2 \ 12 \ 8} \\ 2 \ 6 \ 4 \\ \underline{\quad 3 \ 2} \end{array}$$

* must have common den. to +/- frac.

* find LCM of den. to get LCD

$$\text{LCM} = \text{LCD}$$

Find LCD.

$$1) \frac{7}{8}, \frac{5}{6} \quad \boxed{24}$$

$$2) \frac{5}{6}, \frac{13}{15} \quad \boxed{30}$$

$$\begin{array}{r} 2 \overline{) 8 \ 6} \\ \underline{4 \ 3} \end{array}$$

$$\text{LCM} = 2 \cdot 4 \cdot 3 = 24$$

$$\begin{array}{r} 3 \overline{) 6 \ 15} \\ \underline{2 \ 5} \end{array}$$

$$\text{LCM} = 3 \cdot 2 \cdot 5 = 30$$

+/- write answers SF.

$$1.) \frac{1}{3} + \frac{1}{2}$$

STACK

$$\begin{array}{r} \frac{1 \cdot 2}{3 \cdot 2} = \frac{2}{6} \\ + \frac{1 \cdot 3}{2 \cdot 3} = \frac{3}{6} \\ \hline \boxed{\frac{5}{6}} \end{array}$$

1st find LCD

2nd Stack and write equivalent frac.

3rd add/sub.

4th rename or simplify

$$2) \quad \frac{5}{8} - \frac{11}{20}$$

$$\frac{5 \cdot 5}{8 \cdot 5} = \frac{25}{40}$$

$$- \frac{11 \cdot 2}{20 \cdot 2} = \frac{22}{40}$$

$$\frac{3}{40}$$

$$\begin{array}{r|l} 2 & 8 \quad 20 \\ \hline 2 & 4 \quad 10 \\ \hline & 2 \quad 5 \end{array}$$

$$\text{LCM} = 2 \cdot 2 \cdot 2 \cdot 5 = 40$$

$$3) \quad \frac{5}{14} + \frac{11}{28}$$

$$\frac{5 \cdot 2}{14 \cdot 2} = \frac{10}{28}$$

$$+ \frac{11}{28} = \frac{11}{28}$$

$$\frac{21}{28} = \frac{3}{4}$$

$$\frac{21}{28} = \frac{3}{4}$$