

Lesson 8 : Adding Fractions

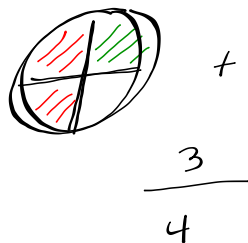
Oct 13<sup>th</sup>, 2022

ex. : Add :

'part' that you have. →

'whole' that you don't have. →  
point of reference

$$\frac{1}{4} + \frac{2}{4}$$



→ draw a picture of Fractions and visualize addition

. When fractions have same denominator

step : Add tops and keep bottom the same.

$$\frac{1}{4} + \frac{2}{4}$$

$$\frac{1+2}{4}$$

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

You do pg 9.7  
a) - d) and draw a picture.

Adding Mixed Numbers w̄ same Denominator in Fractional Part

ex. 1:

$$2 \frac{2}{4} + 3 \frac{1}{4}$$



$$(2 + 3) + (\frac{2}{4} + \frac{1}{4})$$

$$5 + \frac{3}{4}$$

$$5 \frac{3}{4}$$

• Draw a picture and/or

• Give a context: \$

$$2 \frac{3}{4} \$ + 3 \frac{1}{4} \$$$

$$2.50 \$ + 3.25 \$$$

$$5.75 \$$$

$$5 \frac{3}{4} \$$$

step i  
Add the integers

step ii

Add the fractional parts like before

ex. 2:

$$1 \frac{3}{4} + 2 \frac{3}{4}$$



$$(1 + 2) + \frac{6}{4}$$

$3 \frac{6}{4}$  improper fraction by convention you don't keep.

convert

$$3 + \frac{6}{4}$$

$$3 + 1 \frac{2}{4}$$

$$4 \frac{2}{4}$$

$$4 \frac{1}{2}$$

step iii:

If fraction is improper, convert to mixed number and add integers.

$$\begin{array}{r} 4 \overline{) 6} \\ - 4 \\ \hline 2 \end{array}$$

$$\therefore \frac{6}{4} = 1 \frac{2}{4}$$

$$= 1 \frac{1}{2}$$

you do:

$$\text{Add: } 2 \frac{4}{5} + 3 \frac{3}{5}$$

and  
pg 9.8

#2

Adding Fractions w/ Different Denominators

↳ problem: so find common denominator!  
LS

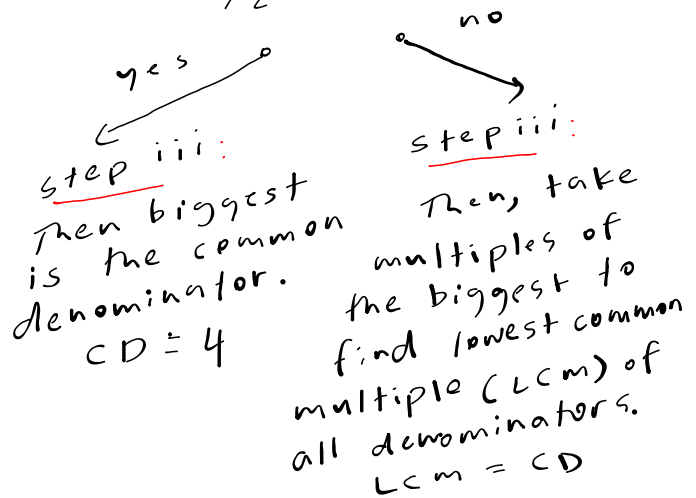
$$\frac{1}{2} + \frac{1}{4}$$



Step i: identify biggest denominator: 4

Step ii: determine if other denominators are divisors / factors of biggest. big others

$$4/2 = 2 \text{ (whole \#)} \checkmark \text{ yes}$$



$$\frac{1 \times 2}{2 \times 2} + \frac{1}{4} \quad \text{CD} = 4$$

$$\frac{2}{4} + \frac{1}{4}$$

$$\frac{2 + 1}{4}$$

$$4$$

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

Step iv: make denominators all into common denominator (CD)

AND - do same thing to top!

ex.

Add

$$\frac{2}{3} + \frac{1}{4}$$

$$\frac{2}{3} \times 4 + \frac{1}{4} \times 3$$

$$\frac{8}{12} + \frac{3}{12}$$

$$\frac{8 + 3}{12}$$

$$\frac{11}{12}$$

multiples.  
 $4 \times 1 = 4$   
 $4 \times 2 = 8$   
 $4 \times 3 = 12$   
 $LCM = CD$

Step i: identify biggest denominator: 4

Step ii: determine if other denominators are divisors/factors of biggest.

$\frac{big}{others} = \frac{4}{3} = 1.3$   
 not whole, no

yes  
Step iii: then biggest is the common denominator.  
 $CD = 4$

Step iii: Then, take multiples of the biggest to find lowest common multiple (LCM) of all denominators.  
 $LCM = CD$

Step iv: make denominators all into common denominator (CD)

ANP - do same thing to top!

Pg 9.18

$$d). \quad 3 \frac{1}{2} + 2 \frac{1}{4} + \frac{1}{5}$$

$$(3 + 2) + \left( \frac{1}{2} \times \frac{10}{10} + \frac{1}{4} \times \frac{5}{5} + \frac{1}{5} \times \frac{4}{4} \right)$$

$$5 + \left( \frac{10}{20} + \frac{5}{20} + \frac{4}{20} \right)$$

$$5 + \frac{10 + 5 + 4}{20}$$

$$5 \frac{19}{20}$$

$$\begin{aligned} 5 \times 1 &= 5 \\ 5 \times 2 &= 10 \\ 5 \times 3 &= 15 \\ 5 \times 4 &= \boxed{20} \\ \text{LCM} &= 20 \end{aligned}$$

You do:  
the handouts!