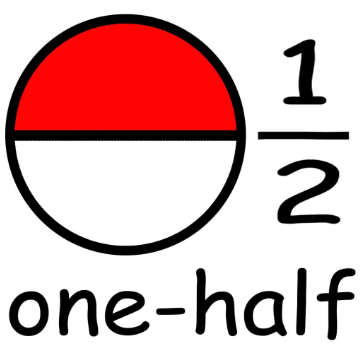
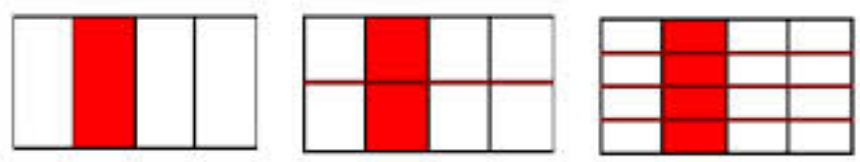
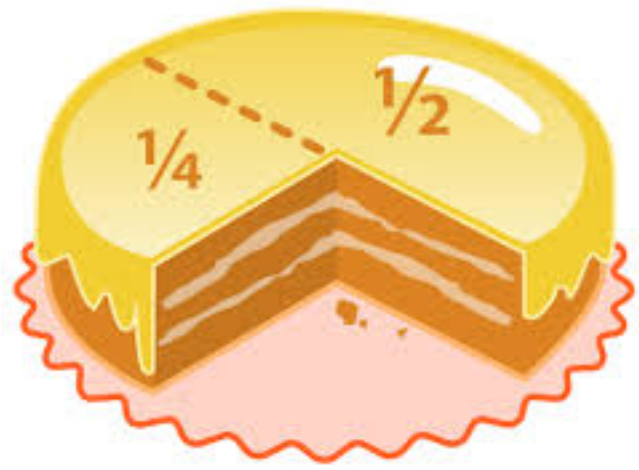


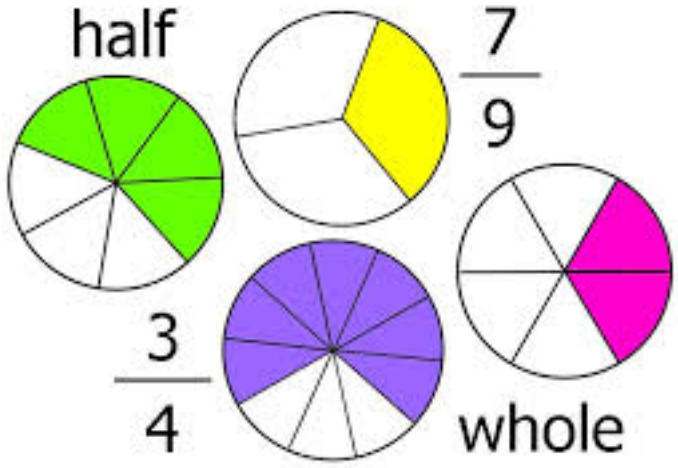


$$\frac{1}{4} = \frac{2}{8} = \frac{4}{16}$$

Unit 5 In textbook Gr 7

Adding/Subtracting Fractions





Operations with Fractions

unit fraction

Fraction Rectangles

related denominators

simplest form

unrelated denominators

common denominator

Using Models to Add Fractions

Let's use pattern blocks...



represents

1Whole

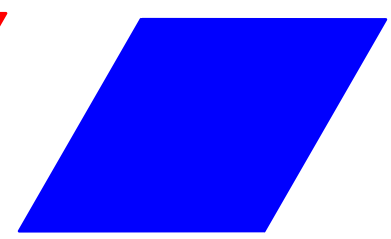
_____



Compare to 1 Whole

represents

_____



Compare to 1 Whole

represents

_____



Compare to 1 Whole

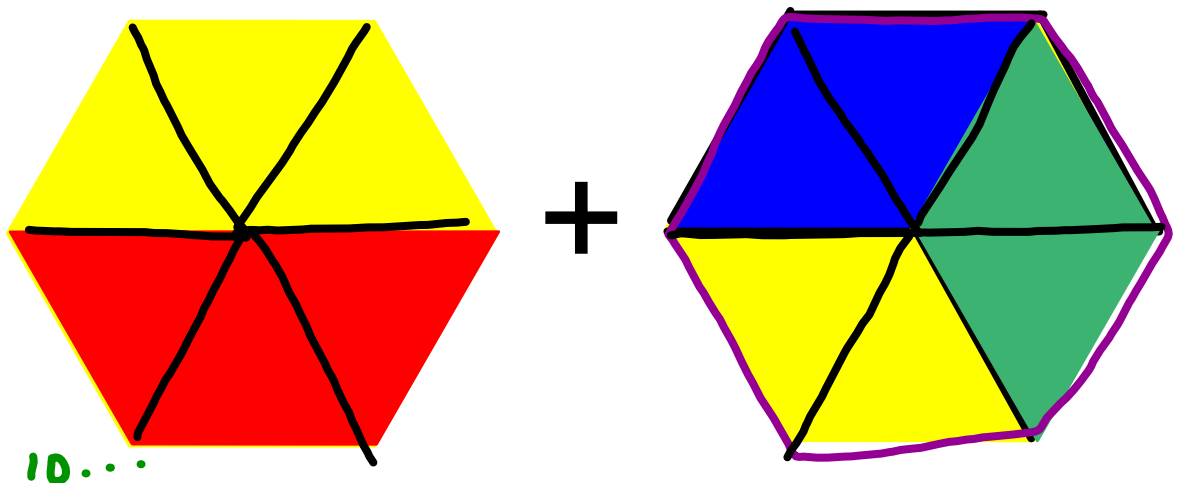
represents

_____

What fraction is yellow?

[Using Patten Blocks to Add Fractions]

Hint: do they have the same size pieces or the same number of pieces?



2, 4, 6, 8, 10 . . .
3, 6, 9, . . .

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

$\frac{3}{6} + \frac{2}{6}$

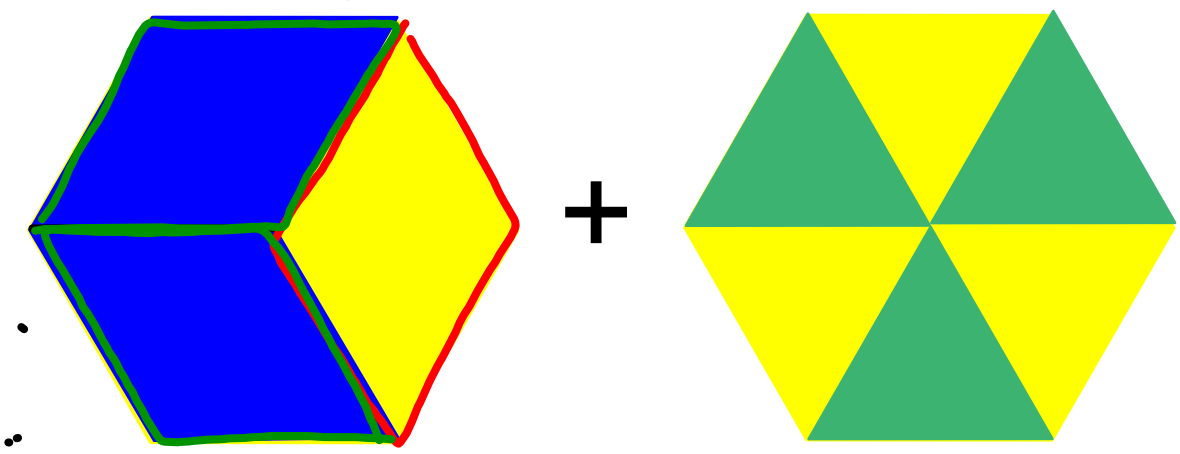
$\frac{5}{6}$

Last year we came to the conclusion that we needed common denominators.

Hint: same number of pieces

what fraction is yellow?

Last year we came to the conclusion that we needed common denominators.



3, 6, 9, 12, ...

6, 12, 18...

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

$\frac{2}{6}$ + $\frac{3}{6}$

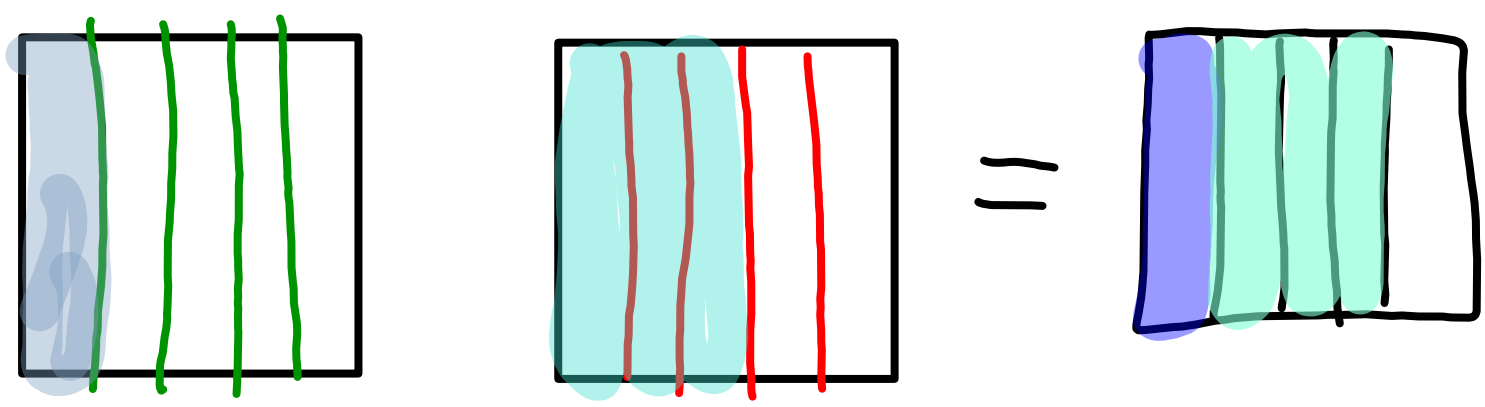
$\frac{5}{6}$

Let's use fraction rectangles instead of fraction circles...

easier to cut rectangles

Shade → Cut in →

$$\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$$

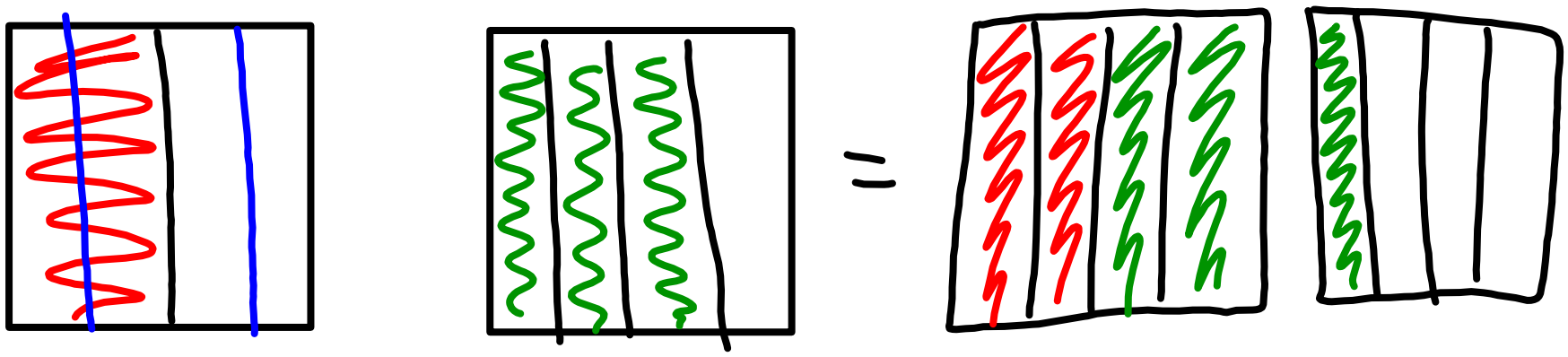


$$\begin{matrix} 2\times \\ 2\times \end{matrix} \frac{1}{2} + \frac{3}{4}$$

Factors → 2, 4, 6, 8, . . .

4, 8, 12, ...

$$\frac{2}{4} + \frac{3}{4} = \frac{5}{4} = 1\frac{1}{4}$$

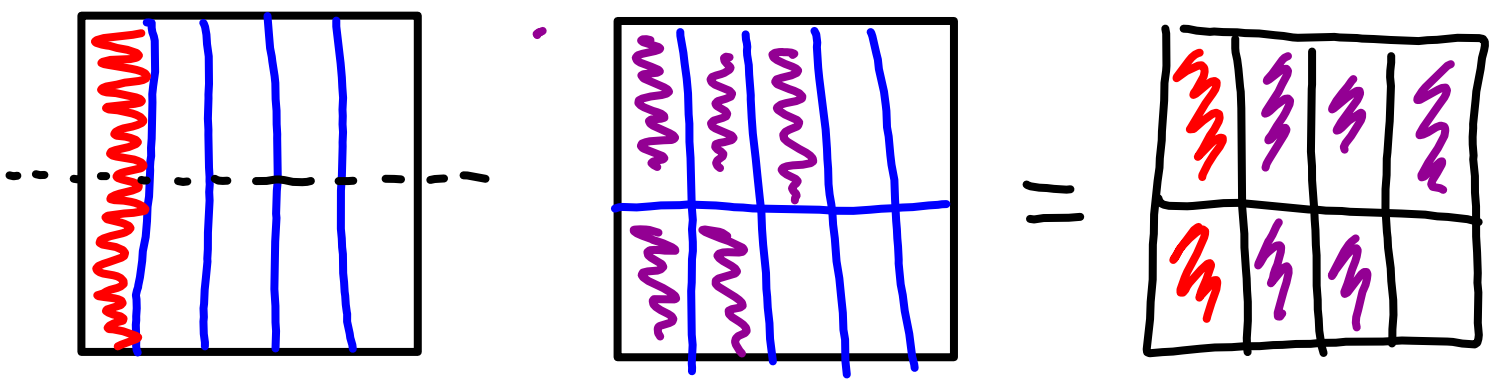


4 → 4, 8, 12 . . . .

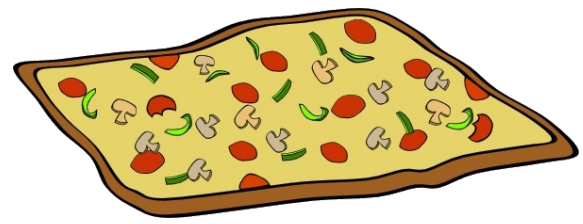
8 → 8, 16 . . . .

$\frac{1}{4}^{\times 2} + \frac{5}{8}$

$\frac{2}{8} + \frac{5}{8} = \boxed{\frac{7}{8}}$



Noah and Brett each bought a small pizza.



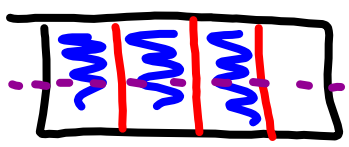
Noah ate $\frac{3}{4}$ of his pizza and Brett ate $\frac{7}{8}$ of his.

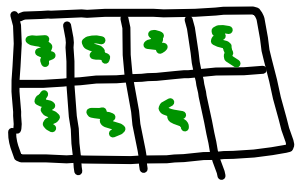
How much pizza did Noah and Brett eat together?

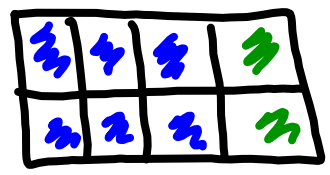
add

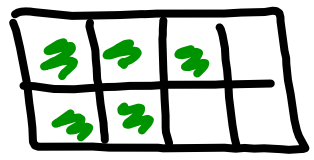
Noah

Brett









$1\frac{5}{8}$

$\frac{3 \times 2}{4 \times 2} + \frac{7}{8}$

$\frac{6}{8} + \frac{7}{8}$

$= \frac{13}{8} = 1\frac{5}{8}$ pizza

Class / Homework

Gr 7 Textbook

Last year we came to the conclusion that we needed common denominators.

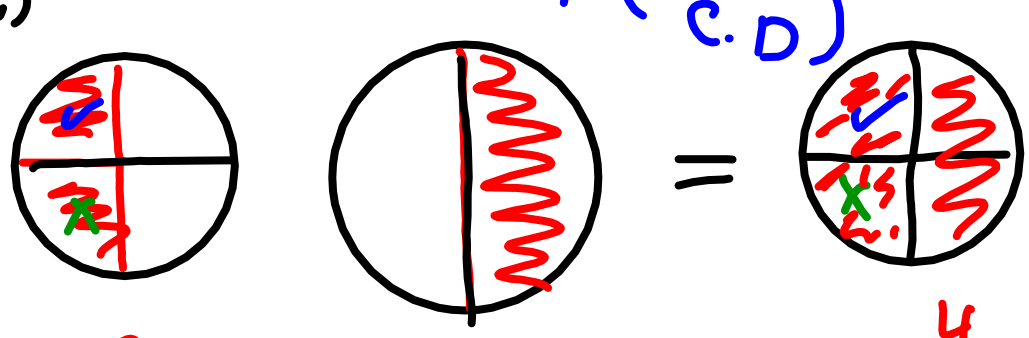
You can ~~model 2a~~, 2b THEN use C.D. for al the rest.

Page 179 #1
Page 180 #2, #3, ~~#5~~, ~~#6~~

use C.D. Don't need boxes

a b Ruler
c d (find C.D)

1a)

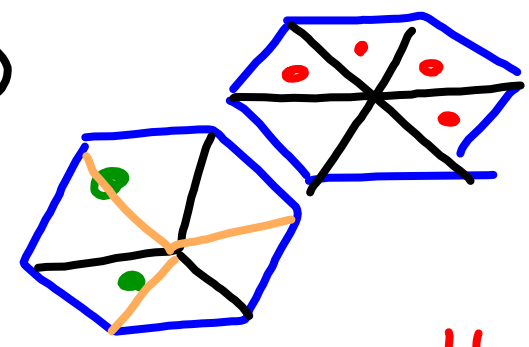


$\frac{2}{4} + \frac{1}{2} = \frac{4}{4}$

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

$\frac{4}{4} = 1$

1b)



$\frac{2}{3} = \frac{4}{6}$ (×2)

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

$= \frac{8}{6}$

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

3 → 3, 6, 9, 12...
2 → 2, 4, 6, 8...

2a) $\frac{7}{8} + \frac{1}{2}$ (×4)

2 → 2, 4, 6, 8
8 → 8, 16

$\frac{7}{8} + \frac{4}{8}$

$= \frac{11}{8}$

$= 1\frac{3}{8}$

2c) $\frac{2}{3}$ (×2) $+ \frac{1}{2}$ (×3)

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

$= \frac{7}{6}$

$= 1\frac{1}{6}$