



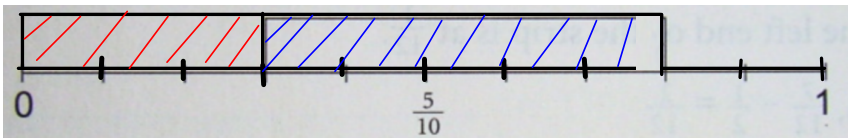
Quiz Time

Grade 7 Warm Up



For the Test

Write an addition statement for the following strips.

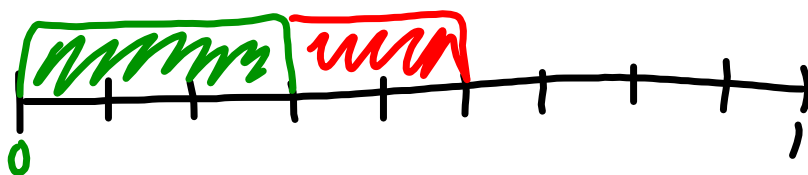


10 dashes to make 1 whole
 ↳ each line is $\frac{1}{10}$

$$\left(\frac{3}{10}\right) + \left(\frac{5}{10}\right)$$

$$\frac{8}{10} \begin{array}{l} \div 2 \\ \div 2 \end{array} \text{ Check does it reduce}$$

$$\boxed{\frac{4}{5}}$$



↳ 9 dashes to get 1 whole

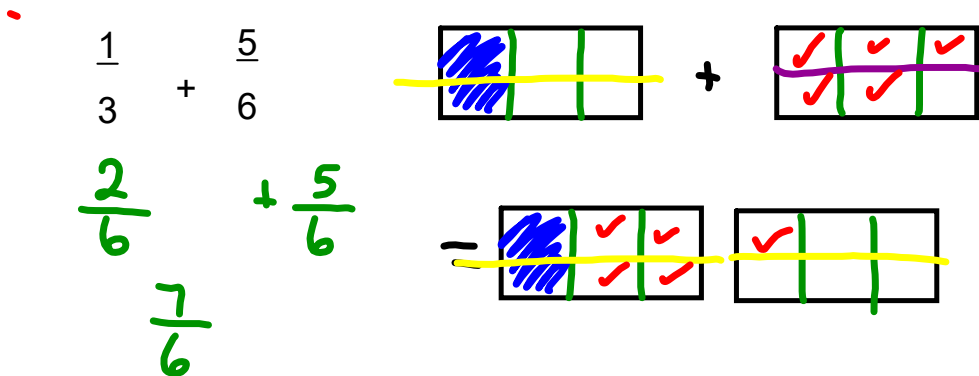
↳ each line is $\frac{1}{9}$

$$\left(\frac{3}{9}\right) + \left(\frac{2}{9}\right) = \frac{5}{9}$$

$$\left(\frac{1}{3}\right) + \left(\frac{2}{9}\right) = \frac{5}{9}$$

Reduce fractions

model **With Rectangle**



Add the following (Use CD)

$$\begin{array}{r}
 2 \times \frac{7}{8} + \frac{3}{9} \\
 \frac{12}{8} + \frac{8}{9} \\
 \xrightarrow{\times 2} \frac{14}{24} + \frac{9}{24} \\
 \text{Add top} \\
 = \frac{23}{24}
 \end{array}$$

Ex) **FF reduce**

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

Solutions

Sheet Extra Practice 3

3. Add. Estimate first.

a) $\frac{3}{5} + \frac{1}{10}$

$$\frac{6}{10} + \frac{1}{10} = \frac{7}{10}$$

b) $\frac{3}{10} + \frac{1}{2}$

$$\frac{3}{10} + \frac{5}{10} = \frac{8}{10}$$

c) $\frac{6}{8} + \frac{3}{4}$

$$\frac{6}{8} + \frac{6}{8} = \frac{12}{8}$$

d) $\frac{3}{8} + \frac{5}{2}$

$$\frac{3}{8} + \frac{20}{8} = \frac{23}{8}$$

4. Add. Estimate first.

a) $\frac{1}{4} + \frac{3}{10}$

$$\frac{5}{20} + \frac{6}{20} = \frac{11}{20}$$

b) $\frac{5}{6} + \frac{7}{8}$

$$\frac{20}{24} + \frac{21}{24} = \frac{41}{24}$$

c) $\frac{4}{3} + \frac{1}{6}$

$$\frac{8}{6} + \frac{1}{6} = \frac{9}{6}$$

d) $\frac{7}{2} + \frac{3}{8}$

$$\frac{28}{8} + \frac{3}{8} = \frac{31}{8}$$

solutions

5. These are fractions of the students in a class who chose their favourite sport.

Baseball	Basketball	Hockey	Snowboarding	Swimming	Tennis
$\frac{1}{4}$	$\frac{1}{9}$	$\frac{1}{3}$	$\frac{1}{6}$	$\frac{1}{18}$	$\frac{1}{12}$

Calculate the total fraction of the class that chose:

- sports played with a ball
- sports played on a court
- winter sports
- sports that use a net

a) sports with a ball

$$\frac{1}{4} + \frac{1}{9} + \frac{1}{12}$$

$$\frac{9}{36} + \frac{4}{36} + \frac{3}{36} = \frac{16}{36}$$

b) played on a court

$$\frac{1}{9} + \frac{1}{12}$$

$$\frac{4}{36} + \frac{3}{36} = \frac{7}{36}$$

c) winter sports

$$\frac{1}{3} + \frac{1}{6}$$

$$\frac{2}{6} + \frac{1}{6} = \frac{3}{6} \text{ or } \frac{1}{2}$$

d) uses a net

$$\frac{1}{9} + \frac{1}{3} + \frac{1}{12}$$

$$\frac{4}{36} + \frac{12}{36} + \frac{3}{36} = \frac{19}{36}$$

6. Which sum is greater?

How do you know?

$$\frac{7}{8} + \frac{3}{4} \quad \text{or} \quad \frac{5}{6} + \frac{3}{5}$$

$$6. \quad \frac{7}{8} + \frac{3}{4} \quad \text{or} \quad \frac{5}{6} + \frac{3}{5}$$

$\frac{7}{8}$ is closer to 1

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

so $\frac{7}{8} + \frac{3}{4}$ is greater

or

$$\frac{7}{8} + \frac{6}{8} = \frac{13}{8}$$

$$1 \frac{5}{8}$$

$$> 1 \frac{1}{2}$$

$$\frac{25}{30} + \frac{18}{30} = \frac{43}{30}$$

$$1 \frac{13}{30}$$

$$< 1 \frac{1}{2}$$

pg 190

$$1 a) \frac{3}{5} + \frac{3}{10}$$
$$\frac{6}{10} + \frac{3}{10} = \frac{9}{10}$$

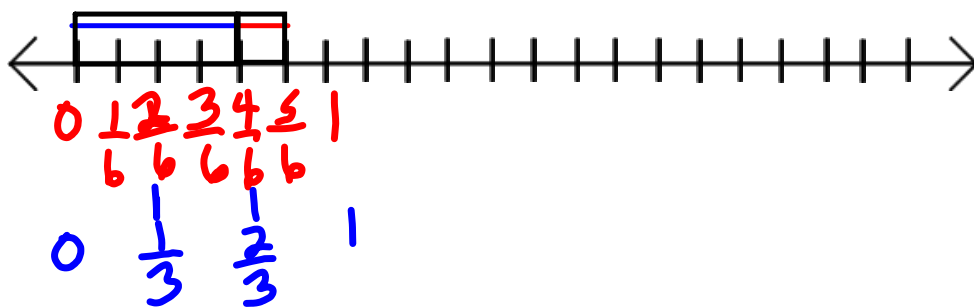
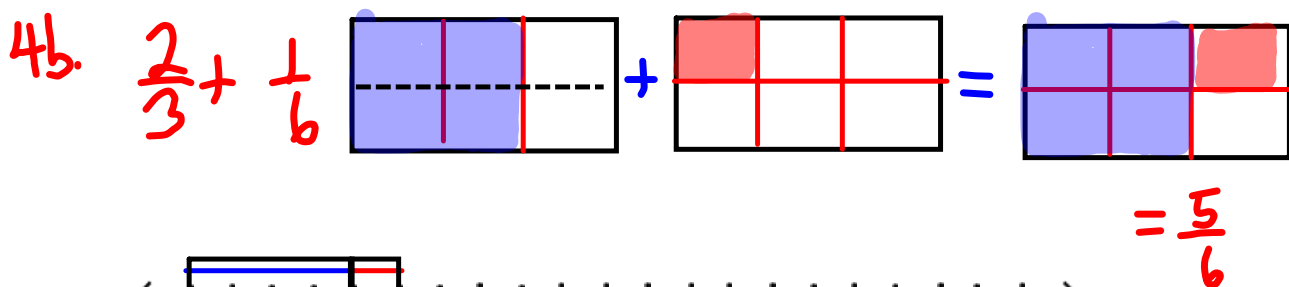
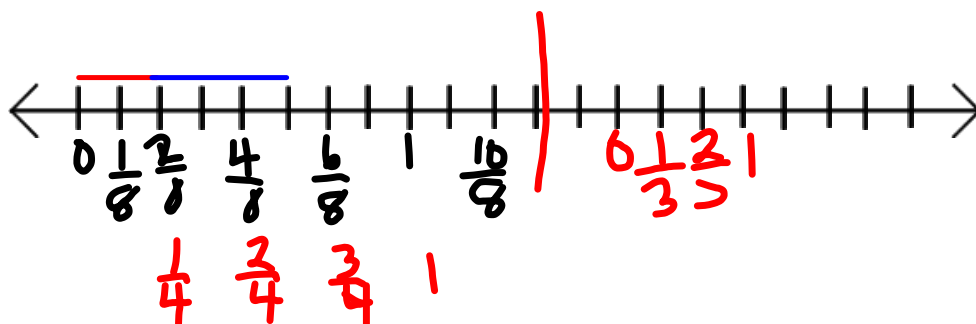
$$2. \frac{5}{12} + \frac{3}{6}$$
$$\frac{5}{12} + \frac{6}{12} = \frac{11}{12}$$

$$3 a) \frac{1}{2} + \frac{5}{12}$$
$$\frac{6}{12} + \frac{5}{12} = \frac{11}{12}$$

$$b) \frac{3}{12} + \frac{3}{4}$$
$$\frac{3}{12} + \frac{9}{12} = \frac{12}{12}$$

Orally discuss pg 190, then quiz.

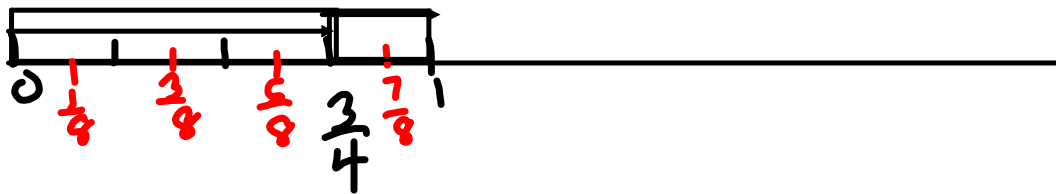
4a $\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$



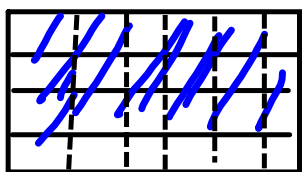
$$\frac{2}{3} + \frac{1}{6}$$

$$\frac{4}{6} + \frac{1}{6} = \frac{5}{6}$$

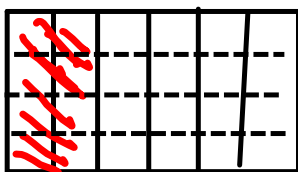
$$34 \quad \frac{3}{4} + \frac{2}{8} = 1 \quad \text{or} \quad \frac{8}{8} \quad 23$$



c) $\frac{3}{4} + \frac{2}{6}$

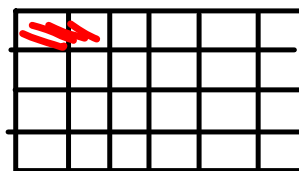
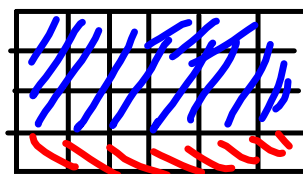


$\frac{18}{24} +$



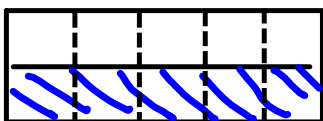
$\frac{8}{24}$

=

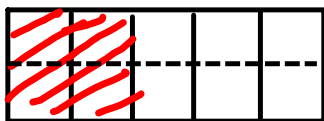


$\frac{26}{24}$ or $1\frac{2}{24}$

d) $\frac{1}{2} + \frac{2}{5}$

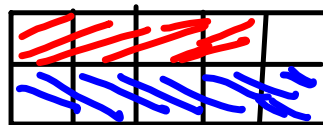


$\frac{5}{10} +$



$\frac{4}{10}$

=



$\frac{9}{10}$

Using Models to Subtracting Fractions

Let's use pattern blocks...

$$\begin{array}{r}
 2 \times \frac{2}{3} - \frac{1}{2} \times 3 \\
 \frac{4}{6} - \frac{3}{6} \\
 \frac{1}{6}
 \end{array}$$

Need $\frac{1}{6}$

Need C.D.

$$\begin{array}{|c|c|c|} \hline \times & \times & \\ \hline \times & \times & \\ \hline \end{array}
 -
 \begin{array}{|c|c|c|} \hline \times & \times & \\ \hline \times & & \\ \hline \end{array}
 =
 \begin{array}{|c|c|c|} \hline & & \\ \hline & \times & \\ \hline \end{array}
 \frac{1}{6}$$

Subtracting Fractions with Modelling

Use Fraction Blocks/Circles to model:

$$\begin{array}{r} \underline{2} \quad - \quad \underline{1} \\ 3 \quad \quad 2 \\ \frac{4}{6} \quad - \quad \frac{3}{6} \end{array} = \frac{1}{6}$$

Need C. D

Remove this shape from box 1

$\frac{1}{6}$

When we started to add fractions with models we discovered that common denominators helped us, will it help with subtraction?

Model both and break into the same amount of pieces (common denominator).

The second fraction is just to show how many you subtract from the first.

To subtract circle the blocks in the first fraction and use an arrow to show subtract.

Number line Method

$$\begin{array}{r} \underline{2} \quad - \quad \underline{1} \\ 3 \quad \quad 2 \\ \frac{4}{6} \quad - \quad \frac{3}{6} \end{array}$$

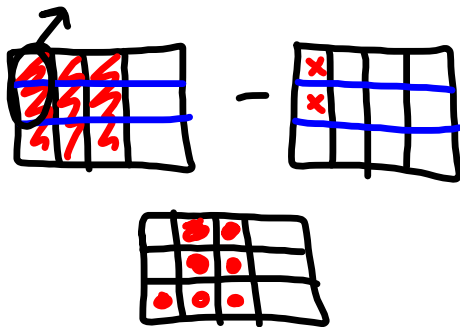
Use the common denominators to help

means 6 dashes makes 1 whole

Subtracting Fractions with Modelling

Use Fraction Blocks/Circles to model:

$$\begin{array}{r}
 3 \times 3 \\
 \underline{3} \\
 4
 \end{array}
 -
 \begin{array}{r}
 1 \times 2 \\
 \underline{1} \\
 6
 \end{array}
 =
 \frac{9}{12} - \frac{2}{12} = \frac{7}{12}$$



When we started to add fractions with models we discovered that common denominators helped us, will it help with subtraction?

Model both and break into the same amount of pieces (common denominator).

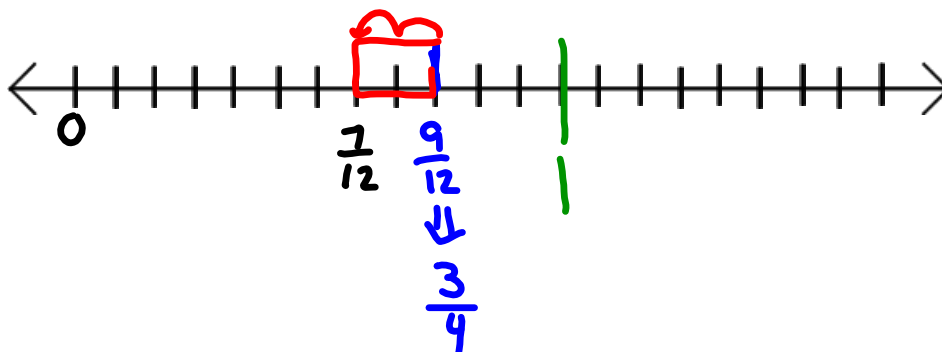
The second fraction is just to show how many you subtract from the first.

To subtract circle the blocks in the first fraction and use an arrow to show subtract.

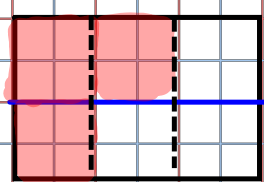
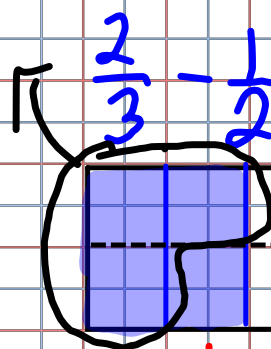
Number line Method

Use the common denominators to help

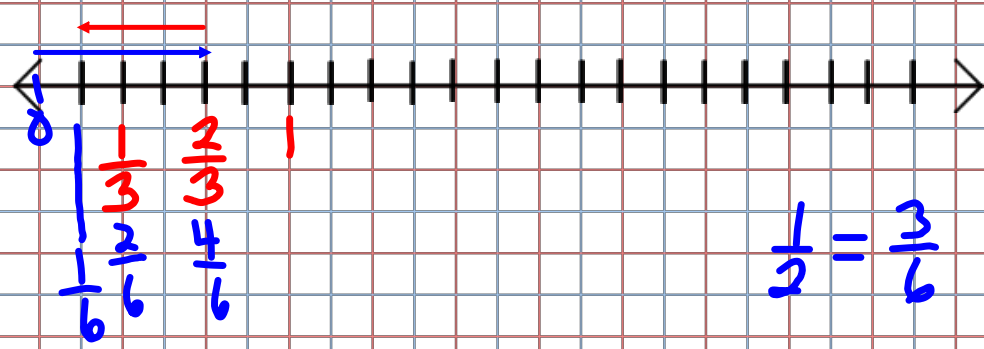
$$\begin{array}{r}
 3 \\
 \underline{3} \\
 4
 \end{array}
 -
 \begin{array}{r}
 1 \\
 \underline{1} \\
 6
 \end{array}
 =
 \frac{9}{12} - \frac{2}{12} = \frac{7}{12}$$



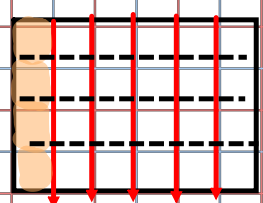
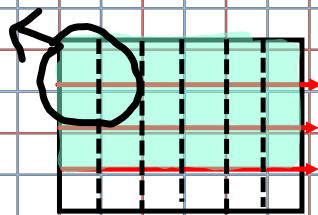
Subtracting Fractions with Modelling



$$\frac{4}{6} - \frac{3}{6} = \frac{1}{6}$$

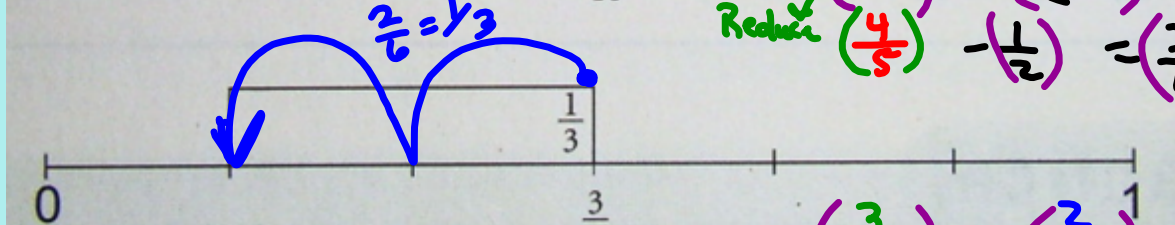
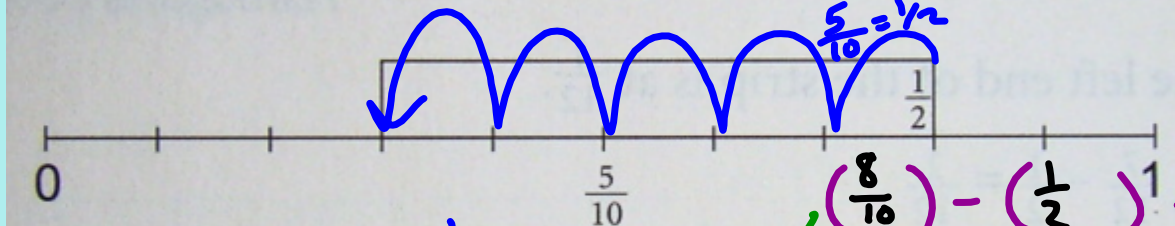
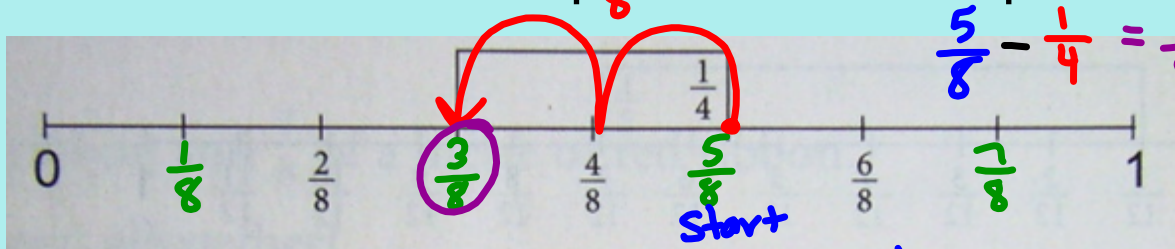


$$\frac{3}{4} - \frac{1}{6}$$



$$\frac{18}{24} - \frac{4}{24} = \frac{14}{24}$$

Write a ^{Big -} subtraction equation $\frac{2}{8} = \frac{1}{4}$ for each picture.



Reduce $\left(\frac{8}{10}\right) - \left(\frac{1}{2}\right) = \frac{3}{10}$
 $\left(\frac{4}{5}\right) - \left(\frac{1}{2}\right) = \left(\frac{3}{10}\right)$

Reduce $\left(\frac{3}{6}\right) - \left(\frac{2}{6}\right) = \frac{1}{6}$
 $\left(\frac{1}{2}\right) - \left(\frac{1}{3}\right) = \frac{1}{6}$

Write a subtract using a number line (and Fraction Strips)

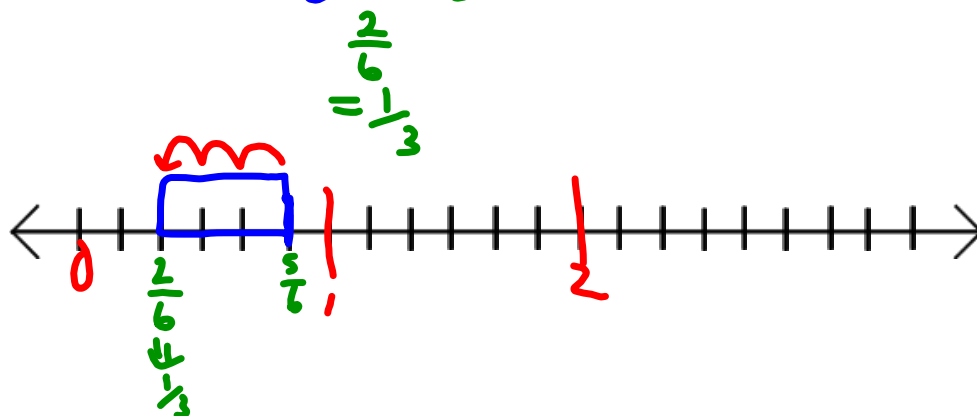
Subtract: $\frac{5}{6} - \frac{1}{2}$

$\frac{5}{6} - \frac{3}{6}$

(Handwritten notes: $\times 3$ above $\frac{1}{2}$, $\times 3$ next to $\frac{3}{6}$, and $\frac{1}{2} = \frac{3}{6}$ with an arrow pointing to $\frac{3}{6}$)

Think addition.
 What do we add to $\frac{1}{2}$ to get $\frac{5}{6}$?

Hint: Use C.D.



Test _____ on Adding and Subtracting Fractions

Class/Homework

Page 193

Find ^{Common deno} don't subtract

$$(-) - (-) = ()$$

#1, 2, 3(model), ~~4~~a, 5, 6(model)

use common denominator

then common den for real

For number 2 work it out but also use the thing below to answer

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

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

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

$$1 - \frac{5}{6}$$

$$\frac{6}{6} - \frac{5}{6} = \frac{1}{6}$$

Allie