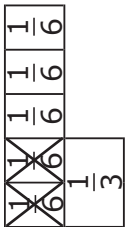


$$= \frac{1}{2}$$

$$\frac{3}{9} = \frac{1}{3}$$

$$\frac{9}{9} = 1$$



$$\frac{5}{6} - \frac{1}{3}$$

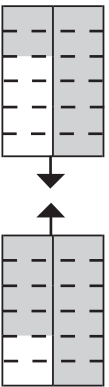
- Represent first fraction
- Take away second fraction
- Simplify - fewest pieces of one color

Subtraction - unlike Denominators

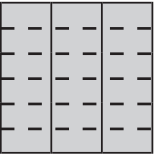
Addition - Mixed Fractions

- Represent both mixed fractions
- Legal trade for 1 color
- Convert to improper fractions
- Push together
- Convert sum to mixed fraction
- Simplify - fewest pieces of one color

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

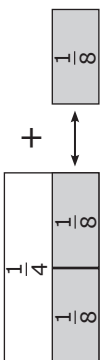


$$\frac{8}{6} + \frac{10}{6} = \frac{18}{6}$$



$$\frac{18}{6} = 3$$

$$\frac{3}{8} + \frac{1}{8} = \frac{4}{8}$$



$$\frac{1}{8} + \frac{1}{4} = \frac{3}{8}$$

- Simplify - fewest pieces of one color
- Push together
- Legal trade for one color
- Represent both fractions

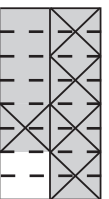
Unlike Denominators

Addition

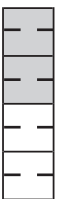
Subtract - Mixed Fractions

- Represent first mixed fraction
- Legal trade for 1 color
- Convert to improper fraction
- Take away the 2nd fraction
- Convert difference to mixed fraction
- Simplify - fewest pieces of one color

$$1\frac{6}{8} - 1\frac{1}{4}$$



$$\frac{14}{8} - \frac{10}{8} = \frac{4}{8}$$



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

Fractions Book

Multiply Fractions

_____ groups of _____ items
Start by representing the second fraction

Make students "S" the problem

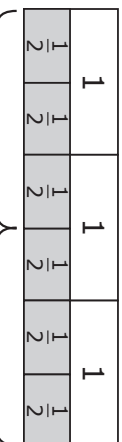
$$2 \cdot \frac{1}{3}$$

"2 groups with $\frac{1}{3}$ item in each group"

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

$$\frac{1}{2} \cdot 3 = \frac{3}{2}$$

" $\frac{1}{2}$ of a group of 3"



1 group of $\frac{1}{2}$ of the group of 3 = $1\frac{1}{2}$

$$= \frac{1}{10}$$

1 whole unit

Blue Kit 3

$$= \frac{1}{9}$$

Pink Purple

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

Green Orange

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

Blue Kit 2

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

Red

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

Yellow

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

Brown

Blue Kit 1

Divide Whole Numbers and Fraction

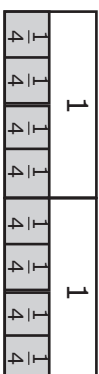
"How many groups of _____ are in _____?"

Represent the first fraction and divide it by the value of the second fraction.

"S" the problem.

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

"How many groups of $\frac{1}{4}$ are in 2?"



There are 8 groups of $\frac{1}{4}$ in 2.