

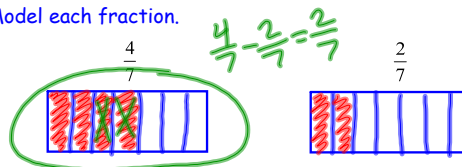
## Math 7 - Unit 1a

Day 7b - Subtracting Rational Numbers  
(Fractions)

## Lesson Objectives:

- I can subtract positive fractions with like and unlike denominators.
- I can subtract negative fractions with like and unlike denominators.

Model each fraction.



What is the difference of the two fraction models?

To subtract fractions with like denominators, subtract the numerators and write the difference over the same denominator.

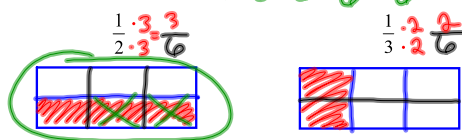
A.  $\frac{5}{11} - \frac{1}{11} = \frac{4}{11}$

B.  $\frac{13}{20} - \frac{3}{20} = \frac{10}{20} = \frac{1}{2}$

C.  $3\frac{7}{8} - 2\frac{5}{8} = 1\frac{2}{8} = \frac{1}{4}$  How is problem C different from A & B?

D.  $8\frac{2}{5} - 6\frac{3}{5} = 2\frac{4}{5}$  How is problem D different from C?

$$\frac{47}{5} - \frac{33}{5} = \frac{14}{5} = 2\frac{4}{5}$$

Model each fraction.  $\frac{1}{2} - \frac{1}{3} = \frac{3}{6} - \frac{2}{6} = \frac{1}{6}$ 

Why can't we just subtract the fractions as they are now?  
What must we do to be able to subtract the fractions?

What is the difference of the two fraction models?

To subtract fractions with unlike denominators, rename the fractions with a common denominator. Then subtract and simplify.

A.  $\frac{9}{16} - \frac{5}{8} = -\frac{1}{16}$

$$\frac{9}{16} + \frac{-10}{16}$$

B.  $4\frac{2}{3} - 3\frac{6}{7}$

$$3\frac{4}{7} - 3\frac{6}{7} = -\frac{2}{7}$$

$$\frac{14}{3} - \frac{27}{7} = \frac{98}{21} - \frac{81}{21} = \frac{17}{21}$$

$$1 - \frac{4}{21}$$

$$\frac{21}{21} - \frac{4}{21} = \frac{17}{21}$$

We can also subtract with NEGATIVE fractions.

A.  $-\frac{19}{20} - \frac{17}{20}$  B.  $4\frac{11}{12} + \left(-3\frac{7}{12}\right)$  C.  $-9\frac{2}{5} + \left(+6\frac{3}{5}\right)$

$$\frac{-19}{20} + \frac{-17}{20} = \frac{-36}{20} = \frac{-9}{5}$$

$$7\frac{11}{12} + 1\frac{5}{12} = 8\frac{16}{12} = 8\frac{4}{3}$$

$$\frac{-47}{5} + \frac{32}{5} = \frac{-14}{5}$$

~~$$4\frac{11}{12} - 3\frac{7}{12} = 1\frac{4}{12} = \frac{1}{3}$$~~

E.  $6\frac{1}{2} - \left(-4\frac{1}{5}\right)$

$$6\frac{5}{10} + \left(+4\frac{2}{10}\right)$$

$$10\frac{7}{10} = \frac{107}{10}$$

# Homework

## Subtracting Fractions WKS

\* Individual Think Time \*



What to do if you get stuck...

1. Reread the problem. Did you write it down correctly?
2. Reread your notes. Is there a problem similar that we did together in class?
3. Find a problem similar in your book. Try this one to see if it helps.
4. Skip the problem until the end of Individual Think Time. Then ask an "educated" question of a neighbor or Mrs. Call.

Today we're working by...

