

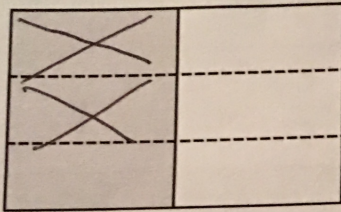
# Making Like Units: Subtraction

Models  
M3 L5-6

## Creating an Model

1. Represent the first fractional unit with vertical lines.
2. On the same area model, represent the second fractional unit with horizontal lines.
3. Mark off the number of like units to be subtracted.
4. The difference is found by counting the number of shaded like unit sections not marked off.

1.  $\frac{1}{2} - \frac{1}{3}$



1 shaded column represents 1 half.

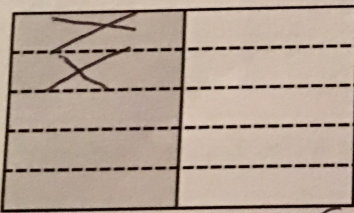
1 row is  $\frac{1}{3}$  and it is equal to  $\frac{2}{6}$  of the like units.

↑  
Mark off this number of like units.

equation:

$$\frac{1}{2} - \frac{1}{3} = \frac{3}{6} - \frac{2}{6} = \frac{1}{6}$$

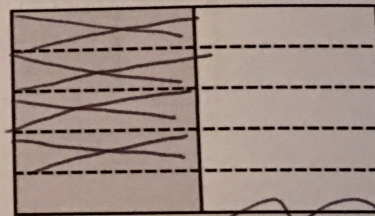
2.  $\frac{1}{2} - \frac{1}{5} = \frac{3}{10}$



1 fifth (2 units)

$$\frac{5}{10} - \frac{2}{10} = \frac{3}{10}$$

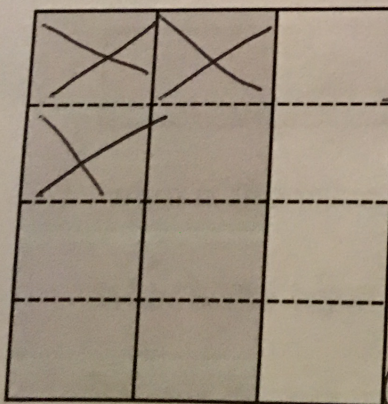
3.  $\frac{1}{2} - \frac{2}{5} = \frac{1}{10}$



2 fifths (4 units)

$$\frac{5}{10} - \frac{4}{10} = \frac{1}{10}$$

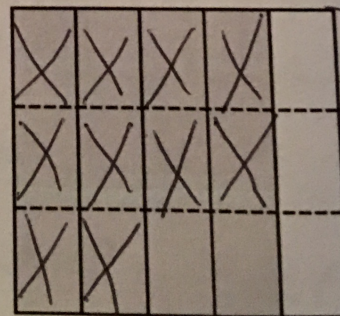
4.  $\frac{2}{3} - \frac{1}{4} = \frac{5}{12}$



1 fourth (3 units)

$$\frac{8}{12} - \frac{3}{12} = \frac{5}{12}$$

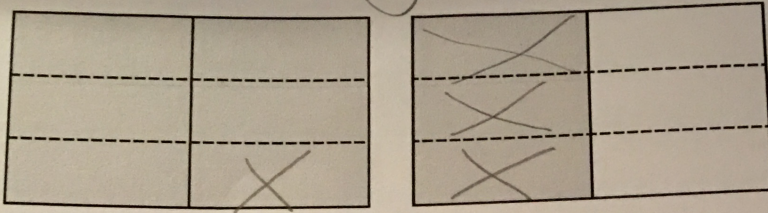
5.  $\frac{4}{5} - \frac{2}{3} = \frac{2}{15}$



2 thirds (10 units)

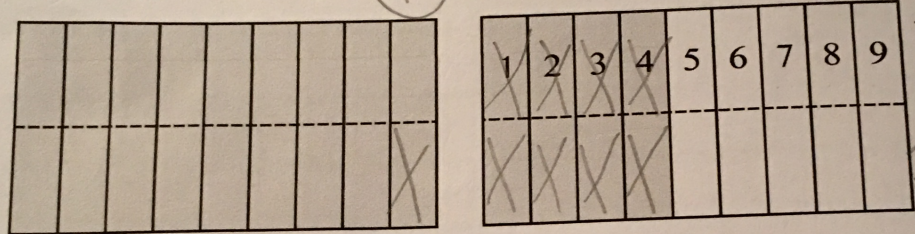
$$\frac{10}{15} - \frac{8}{15} = \frac{2}{15}$$

6.  $1\frac{1}{2} - \frac{2}{3} = \frac{5}{6}$  More than 1 whole minus 2 thirds of 1 whole.

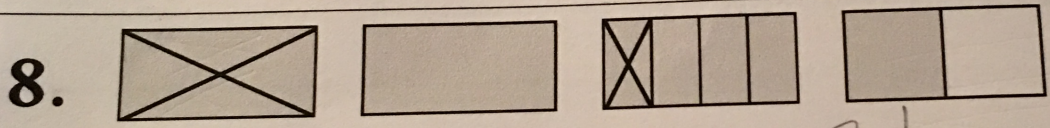


} 2 rows of 1 area model is 2 thirds of 1 whole. (4 units)  
 $\frac{9}{6} - \frac{4}{6} = \frac{5}{6}$

7.  $1\frac{4}{9} - \frac{1}{2} = \frac{17}{18}$  More than 1 whole minus half of 1 whole.



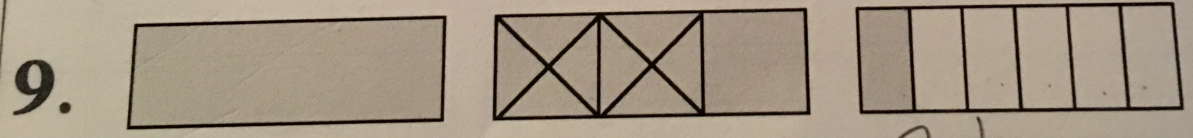
} 1 row of 1 area model is 1 half of 1 whole (9 units)  
 $\frac{26}{18} - \frac{9}{18} = \frac{17}{18}$



What is the value of the shaded sections?  $3\frac{1}{2}$

What is the value of the marked out sections?  $1\frac{1}{4}$

What is the expression represented?  $3\frac{1}{2} - 1\frac{1}{4} =$



What is the value of the shaded sections?  $2\frac{1}{6}$

What is the value of the marked out sections?  $\frac{2}{3}$

What is the expression represented?  $2\frac{1}{6} - \frac{2}{3} =$