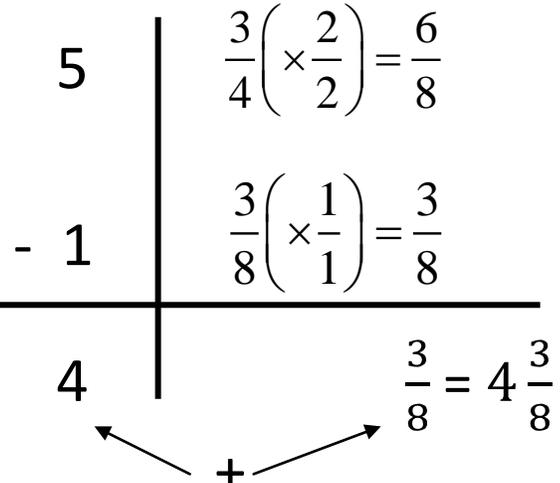
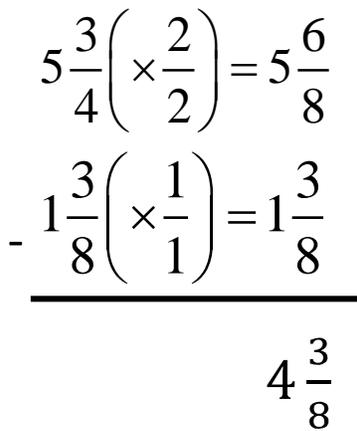
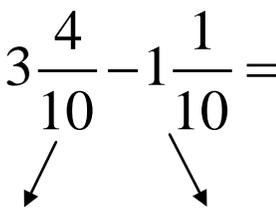


## Subtraction Algorithms

Below are most of the algorithms that you and your classmates came up with in class. Please choose 1 or 2 algorithms that you will use on a regular basis.

Vertical set-up with wholes and fractions separated	Vertical set-up with mixed numbers kept together
$5\frac{3}{4} - 1\frac{3}{8} =$ 	$5\frac{3}{4} - 1\frac{3}{8} =$ 
Horizontal set-up with mixed numbers kept together	Convert to percents, subtract percents, convert back to fraction
$5\frac{3}{4}\left(\times\frac{2}{2}\right) - 1\frac{3}{8}\left(\times\frac{1}{1}\right) =$ $5\frac{6}{8} - 1\frac{3}{8} =$ $4\frac{3}{8}$	$3\frac{4}{10} - 1\frac{1}{10} =$  $340\% - 110\% =$ $230\% = 2\frac{3}{10}$

## Subtraction Algorithms

Converting mixed numbers to improper fractions, subtracting, then converting back to mixed numbers	Borrow from the whole number when the first fraction is smaller than the second fraction
$5\frac{3}{4} - 1\frac{3}{8} =$ $5\frac{3}{4} \left( \times \frac{2}{2} \right) = 5\frac{6}{8} = \frac{46}{8}$ $- \quad 1\frac{3}{8} \left( \times \frac{1}{1} \right) = 1\frac{3}{8} = \frac{11}{8}$ <hr style="width: 100%; margin: 5px 0;"/> $\frac{35}{8} = 4\frac{3}{8}$	$5\frac{1}{6} - 2\frac{3}{4} =$ $5\frac{1}{6} \left( \times \frac{2}{2} \right) = 5\frac{2}{12} = 4\frac{14}{12}$ $- \quad 2\frac{3}{4} \left( \times \frac{3}{3} \right) = 2\frac{9}{12} = 2\frac{9}{12}$ <hr style="width: 100%; margin: 5px 0;"/> $2\frac{5}{12}$
<p><b>2<sup>nd</sup> Example:</b> Borrow from the whole number when the first fraction is smaller than the second fraction</p>	<p><b>2<sup>nd</sup> Example:</b> Converting mixed numbers to improper fractions, subtracting, then converting back to mixed numbers</p>
$8 - 2\frac{3}{8} =$ $8 = 7\frac{8}{8}$ $- \quad 2\frac{3}{8} = 2\frac{3}{8}$ <hr style="width: 100%; margin: 5px 0;"/> $5\frac{5}{8}$	$8 - 2\frac{3}{8} =$ $8 = \frac{64}{8}$ $- \quad 2\frac{3}{8} = \frac{19}{8}$ <hr style="width: 100%; margin: 5px 0;"/> $\frac{45}{8} = 5\frac{5}{8}$