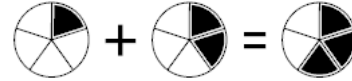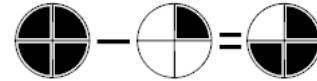# Adding and Subtracting Fractions!

Adding and Subtracting Same Denominators (same bottom numbers)

* Only add or subtract the tops. Never add or subtract the bottoms.

$$\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$$
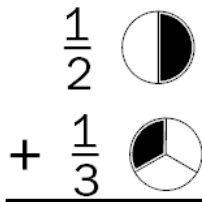
$$\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$$

$$\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$$
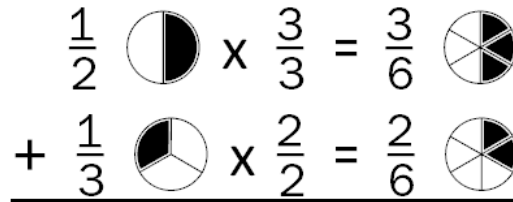
$$\frac{4}{4} - \frac{1}{4} = \frac{3}{4}$$

Adding and Subtracting Different Denominators (different bottom numbers)

* Make the bottom numbers the same first by finding the equivalent fractions. (The easiest way to make them the same is to multiply by the bottom number of the other fraction. In this example, 1/2 would multiply 3/3 and 2/3 would multiply 2/2.)
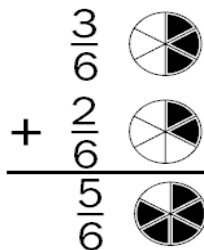
❶ Write the problem vertically (up and down)

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

❷ Multiply both fractions with a fraction that is equivalent to 1 so that they get the same denominator (bottom number).

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

❸ Add the numerators (top numbers). Copy the denominator (bottom number).

$$\frac{3}{6}$$
$$+ \frac{2}{6}$$
$$\overline{\frac{5}{6}}$$

❹ You can recopy the problem horizontally (left to right).

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

$$\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$$