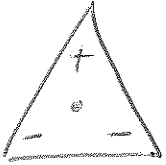


## 2-5 Multiplying and Dividing Fractions

Remember:



- Product or quotient of 2 rational numbers with the same sign is positive
- Product or quotient of 2 rational numbers with different signs is negative

$$+ \cdot + = +$$

$$- \cdot - = +$$

$$+ \cdot - = -$$

$$- \cdot + = -$$

★ <sup>①</sup> When multiplying fractions: Multiply numerators together, Multiply denominators together (Cross reduce first if you can). \*Only works with multiplying

When dividing fractions: Multiply by the reciprocal!

Reciprocal: Two numbers that equal 1 when you multiply them together ex:

$$\frac{1}{2} \text{ and } \frac{2}{1}$$

Find the reciprocal of

Cross Reduce

ON OWN

$\frac{3}{7} \cdot \frac{4}{9}$

$\frac{3}{7} \cdot \frac{4}{9}$ 
 $\frac{2}{3} \cdot \frac{2}{3}$ 
 $= \frac{1}{4}$

Examples:

1.  $\frac{1}{4} \div \frac{2}{9} = \frac{1 \cdot 9}{4 \cdot 2} = \frac{9}{8}$

2<sup>nd</sup> way:  $\frac{1}{4} \cdot \frac{9}{2} = \frac{9}{8}$

2.  $\frac{3}{5} \cdot \frac{10}{12} = \frac{30}{60} = \frac{1}{2}$

2<sup>nd</sup> way:  $\frac{3}{5} \cdot \frac{10}{12} = \frac{2}{4} = \frac{1}{2}$

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

4.  $-\frac{1}{5} \div -\frac{3}{10}$