

Multiplying Fractions

$$\frac{1}{2} \times \frac{3}{5} = \frac{1 \times 3}{2 \times 5} = \frac{3}{10}$$

Just multiply the top numbers and then multiply the bottom numbers

$$\frac{1}{2} \times \frac{2}{5} = \frac{2 \div 2}{10 \div 2} = \frac{1}{5}$$

reduce:
If the top and bottom numbers can be divided by the same number, you have to reduce

$$\frac{1}{\cancel{2}^1} \times \frac{\cancel{2}_1}{5} = \frac{1}{5}$$

cancel: 1
Cancelling is the same as reducing, but easier

$$\frac{\cancel{2}^1}{\cancel{3}_1} \times \frac{\cancel{3}^1}{\cancel{5}_1} \times \frac{\cancel{5}^1}{\cancel{8}_4} = \frac{1}{4}$$

cancel: 1
It's OK to cancel the 2 and the 8 even though they are not next to each other

Mixed numeral

$$3\frac{1}{2} \times \frac{1}{5} = \frac{2 \times 3 + 1}{2} \times \frac{1}{5} = \frac{7}{2} \times \frac{1}{5} = \frac{7}{10}$$

Change the mixed numeral to an improper fraction. Don't change the bottom number.

Improper fraction

$$\frac{1}{5} \times 3 = \frac{1}{5} \times \frac{3}{1} = \frac{3}{5}$$

Change the whole number to an improper fraction by putting it over 1

$$\frac{1}{5} \times 6 = \frac{1}{5} \times \frac{6}{1} = \frac{6}{5} = 1\frac{1}{5}$$

Improper fraction

Mixed numeral

6 is bigger than 5
Reduce by dividing 5 into 6

This example has all the steps:

$$1\frac{3}{5} \times 3 \times \frac{3}{4} = \frac{8}{5} \times \frac{3}{1} \times \frac{3}{\cancel{4}_1} = \frac{18}{5} = 3\frac{3}{5}$$