Proportions

- a ratio is when you compare 2 things
  Ex boys to girls, girls to the whole class

→ there's 3 forms...

① words: 5 to 9
② colon: 5:9
③ fraction: $\frac{5}{9}$

} all 3 read the same way

- a proportion is when you have ratio = ratio

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

ratio

proportion

→ you can use proportions to solve for a variable by cross multiplying

cross multiplying

*works only when you have fraction = fraction
*multiply the diagonals

Ex $\frac{3}{2} \times \frac{x}{8}$

① $3(8) = 2x$ multiply diagonals

② $24 = 2x$ start solving

③ $\frac{24}{2} = \frac{2x}{2}$ get x alone

$12 = x$ final answer