

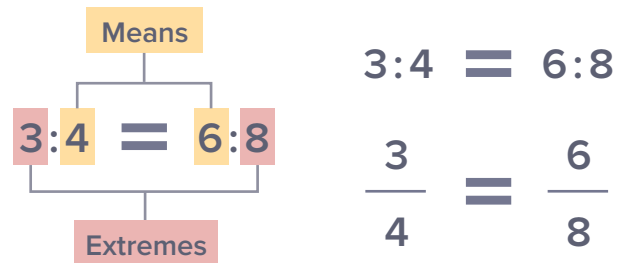
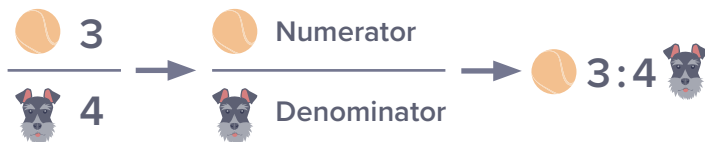
UNDERSTANDING RATIOS



Dose Calc is largely working through a proportion and solving for X. Here's how that concept breaks down...



A **proportion** means that 2 ratios or fractions are equal.



Medications in solutions are also described using ratios. Epinephrine 1:10,000 means there is 1 part medication (epinephrine) in 10,000 parts of solution.

- ✓ A ratio is a number that describes the relationship between 2 numbers.
- ✓ Learning this concept is the first step in understanding how to solve for X, or unknown numbers.
- ✓ Medications in solutions are also described using ratios.
- ✓ Epinephrine 1:10,000 means there is 1 part medication (epinephrine) in 10,000 parts of solution.
- ✓ Does $3:4 = 6:8$? To determine if a ratio is equal, multiply the means by the extremes.
- ✓ Cross-multiplication of the ratios as fractions will determine if they are equal and a proportion.
- ✓ In proportions, the product of the means always equals the product of the extremes.

$$LN \times RD = LD \times RN$$

$$LN \frac{4}{LD \ 3} = \frac{6}{8} RN \ RD$$

$$LN \times RD = LD \times RN$$

$$3 \times 8 = 4 \times 6$$

$$24 = 24$$

You can now remove one of the numbers in the proportion, and solve for X and find the unknown quantity!

NOTES

