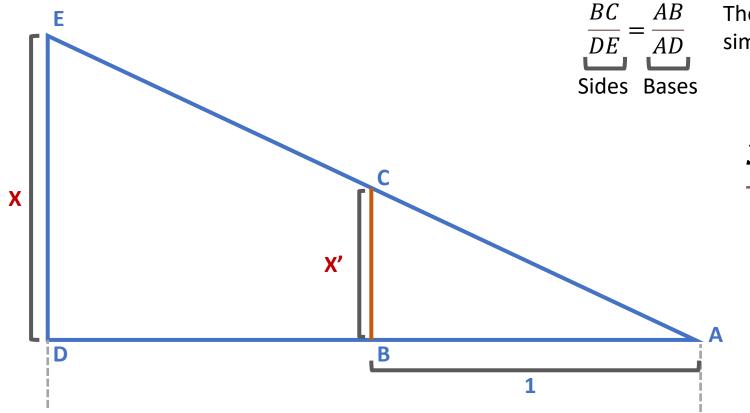


**Z** units (Total distance from projection to eyes



Z

The ratio between the bases and sides of similar triangles is always the same

$$\frac{x'}{x} = \frac{1}{z} \implies \frac{x'}{x} \neq \frac{1}{z}$$

$$x' = \frac{1x}{z} \Longrightarrow \left[ x' = \frac{x}{z} \right]$$

This has an important implication. Consider a large 'Z' in the equation X' = X / Z.

This means that for a larger Z, the resulting X' will be smaller.

In a 3D scenario, this translates into objects that are farther away will appear smaller. The exact effect desired

And the same idea applies to the 'Y' axis.

Therefore:

$$X' = X/Z$$

$$Y' = Y/Z$$