10/28

G3 Notes

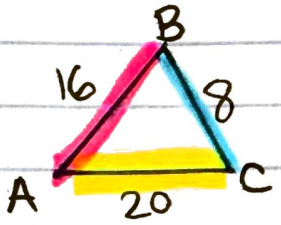
Essential Question: What are some of the characteristics of similar shapes?

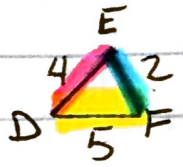
ratio - comparison of 2 quantities

examples: $a:b$, $\frac{a}{b}$, "a to b"

similar shapes - same shape, not necessarily same size

notation $\sim$





similar

$\triangle ABC \sim \triangle DEF$

$\triangle ABC$ is similar to $\triangle DEF$ if

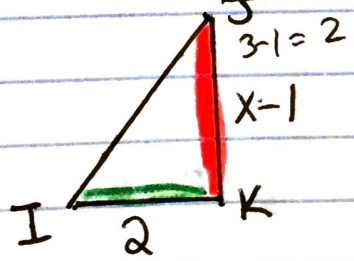
① corresponding angles $\cong$

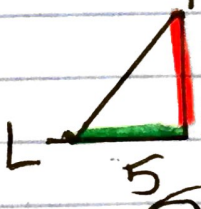
$\angle A \cong \angle D$, $\angle B \cong \angle E$, $\angle C \cong \angle F$

② corresponding sides are in proportion

$\frac{\overline{AB}}{\overline{DE}} = \frac{\overline{AC}}{\overline{DF}} = \frac{\overline{BC}}{\overline{EF}}$ $\quad \frac{16}{4} = \frac{20}{5} = \frac{8}{2}$

Scale FACTOR / Zoom Factor - ratio between any pair of corresponding sides in similar figures





$\triangle IJK \sim \triangle LMP$

$\frac{2}{5} = \frac{x-1}{3x-4}$

$2(3x-4) = 5(x-1)$

$6x-8 = 5x-5$

$-5x \quad\quad -5x$

$x-8 = -5$

$+8 \quad\quad +8$

$\boxed{x = 3}$