Algebra I Monday 10-15-12 Class Notes

Continue: Ch 1-9 Applications of Proportions

Examples ⇒ Pg. 69-71

Similar Figures ⇒ • Sides "in proportion"
• Angles are same

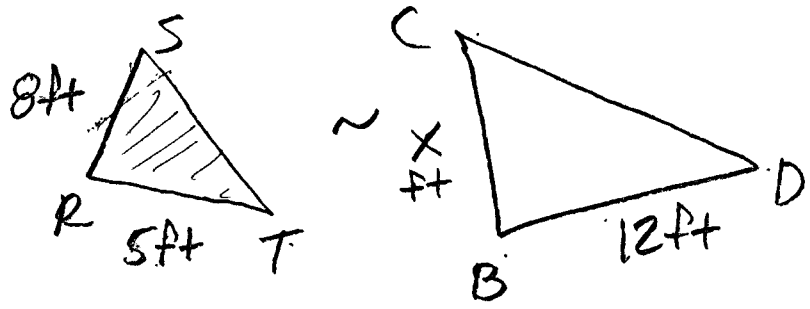
~ means similar

MAKE SURE you use "corresponding" = matching sides

Typical problems: • similar figures
• maps
• models
• scale drawings
• shadows

Ex 1 (A) Pg 69

$\triangle RST \sim \triangle BCD$ Find X



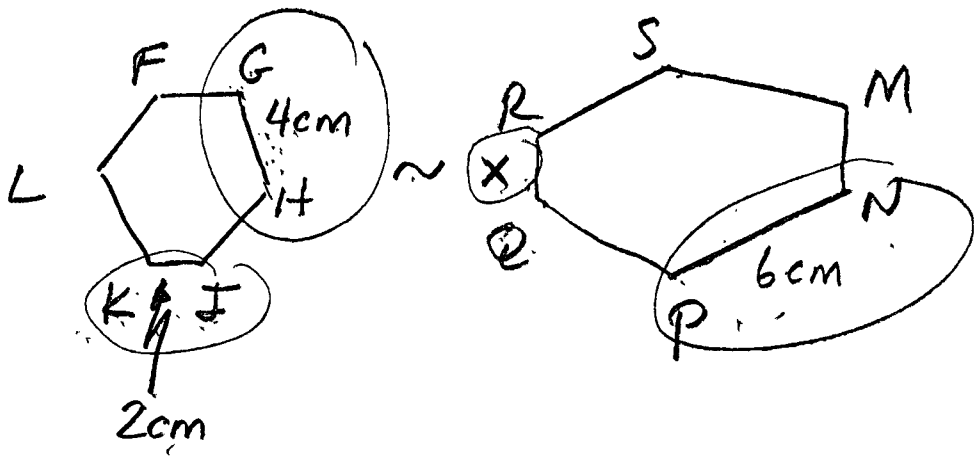
Left $\frac{8}{X}$ Right $\frac{5}{12}$

$$\frac{5X}{5} = \frac{96}{5}$$

$$X = \frac{96}{5} \text{ ft} = 19\frac{1}{5} \text{ ft}$$

Ex 1 B
PG 70

FGHIKL ~ MNPQRS Find x



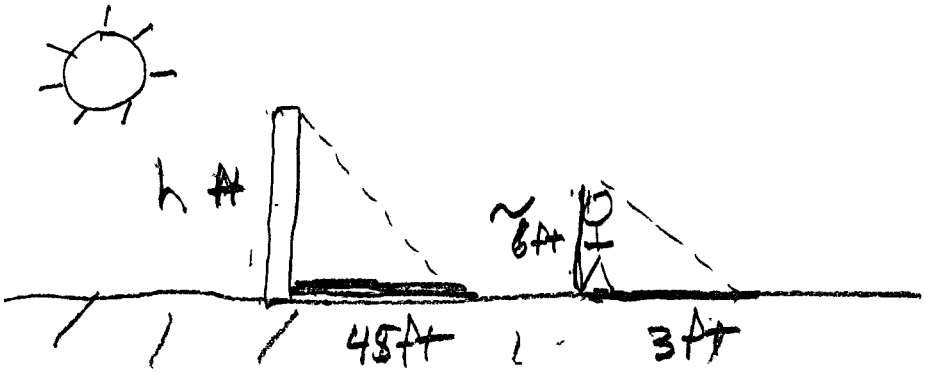
LEFT $\frac{4}{6}$ = $\frac{2}{x}$

RIGHT

$\frac{4x}{4} = \frac{12}{4}$

$x = 3\text{cm}$

(Ex 2) Totem Pole Shadow = 45 ft
PG 70 Same time 6 ft man, shadow = 3 ft
Find height of totem Pole



$$\frac{h}{6} = \frac{45}{3}$$

$$\frac{3h}{3} = \frac{6 \cdot 45}{3_1}$$

$$h = 90 \text{ ft}$$

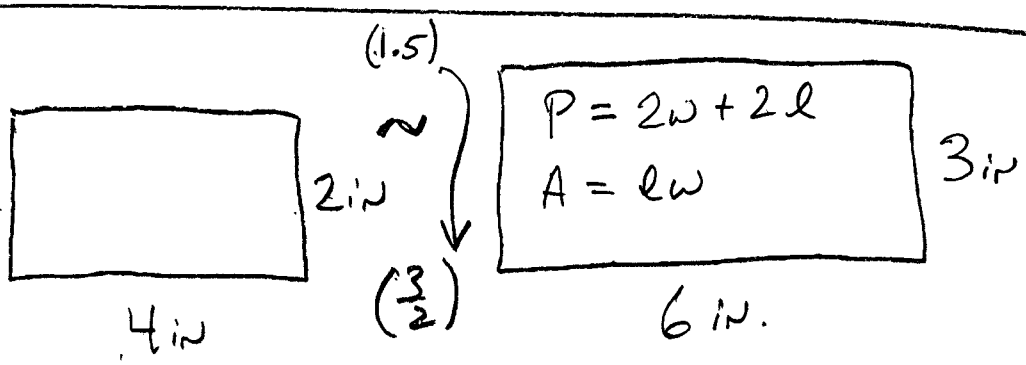
$$\frac{h}{45} = \frac{6}{3}$$

$$3h = 6 \cdot 45$$

$$h = 90 \text{ ft}$$

Ex 3 A

Every dimension of a 2in by 4in rectangle is increased by 1.5. How is the ratio of sides related to ratio of corresponding perimeter and area?



$P = 12$ in

$A = 8$ in^2

$P = 18$ in

$A = 18$ in^2

Ratio of P $\Rightarrow \frac{18}{12} = \frac{6}{4} = \frac{3}{2}$ SAME AS SIDE

Ratio of A $\Rightarrow \frac{18}{8} = \frac{9}{4} = \left(\frac{3}{2}\right)^2$ SQUARE OF SIDE