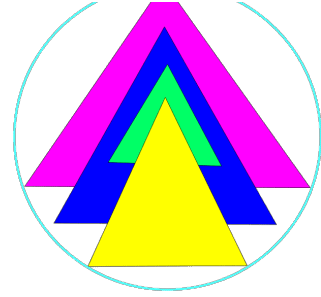


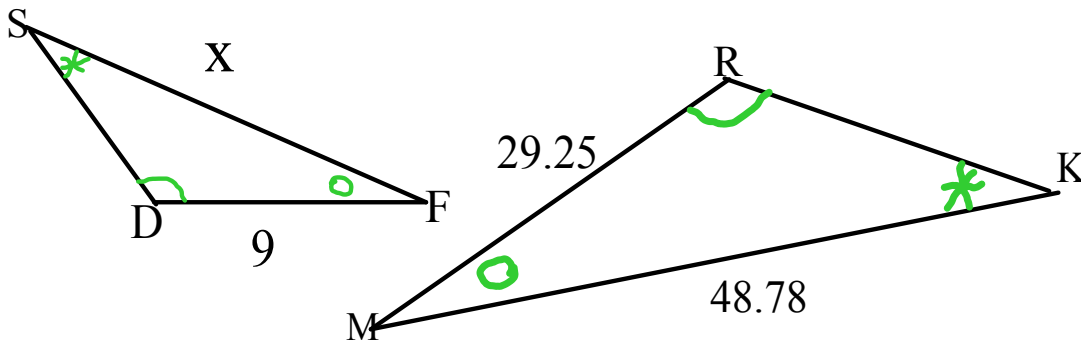
Similar Triangles

Day 2

April 13, 2015



- i) Write the Similarity Statement
- ii) Ratios
- iii) Fill in ratios
- iv) solve for "x"



$$\triangle SDF \sim \triangle KRM$$

$$\frac{SD}{KR} = \frac{SF}{KM} = \frac{DF}{RM}$$

$$\frac{x}{48.78} = \frac{9}{29.25}$$

cross multiply

$$29.25x = (9)(48.78)$$

$$29.25x = 439.02$$

$$\frac{29.25x}{29.25} = \frac{439.02}{29.25}$$

$$x = 15.01$$

$$\triangle SDF \sim \triangle KMR$$

$$\frac{SF}{KM} = \frac{FD}{MR} = \frac{SD}{KR}$$

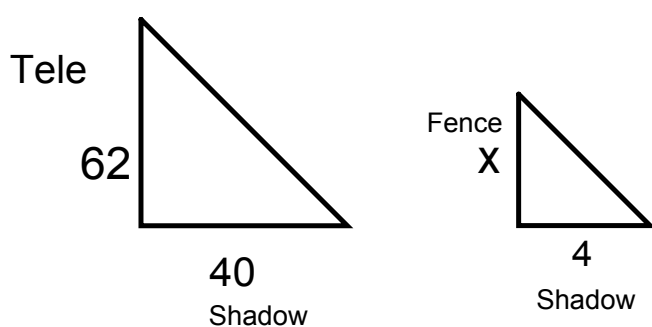
$$\frac{x}{48.78} = \frac{9}{29.25}$$

$$x = \frac{9(48.78)}{29.25}$$

$$= 15$$



A telephone pole that is 62 ft tall cast a shadow that is 40 ft long. Find the height of a fence pole that cast a 4 ft shadow.



$$\frac{62}{40} = \frac{x}{4}$$

$$40x = 62(4)$$

$$40x = 248$$

$$\frac{40x}{40} = \frac{248}{40}$$

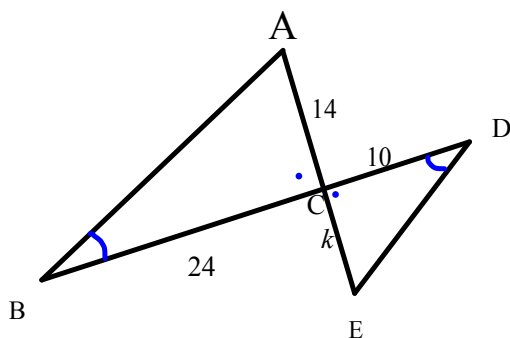
$$x = 6.2$$

$$\frac{x}{62} \rightarrow \frac{4}{40}$$

$$x = \frac{62(4)}{40}$$

$$= 6.2$$

Write a similarity statement and ratios, then find "k"



$$\triangle ABC \sim \triangle EDC \quad \triangle CED \sim \triangle CAB$$

$$\frac{AB}{ED} = \frac{BC}{DC} = \frac{AC}{EC}$$

$$\frac{24}{10} = \frac{14}{k}$$

$$24k = 14(10)$$

$$24k = 140$$

$$\frac{24k}{24} = \frac{140}{24}$$

$$k = 5.8333$$

$$\frac{CE}{CA} = \frac{ED}{AB} = \frac{CD}{CB}$$

$$\frac{k}{14} = \frac{10}{24}$$

$$k = \frac{10(14)}{24}$$

$$= 5.8\bar{3}$$

Homework



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