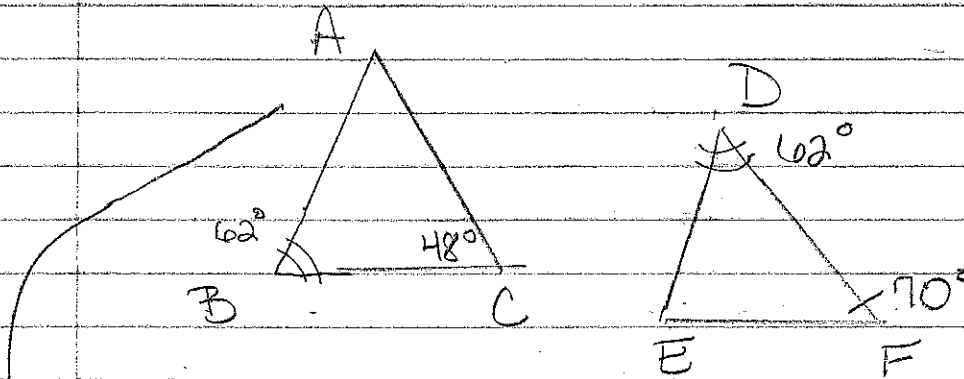


7.5

## Similar Triangles

\* If 2 angles of a triangle are congruent (same) to 2 angles of another triangle, then the triangles are SIMILAR.

\* If 2 pairs of angles are congruent then all 3 angles are congruent.

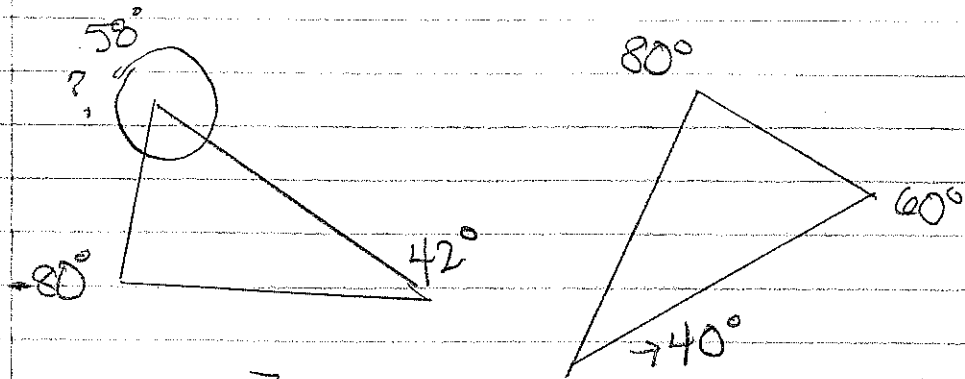


What's  $\angle A$ ?

$$\begin{array}{r} 48 \\ + 62 \\ \hline 110 \end{array} \quad \begin{array}{r} 180 \\ - 110 \\ \hline 70 \end{array} \rightarrow \angle A = 70^\circ$$

triangle ABC is similar to triangle DEF

$$\triangle ABC \sim \triangle DEF$$



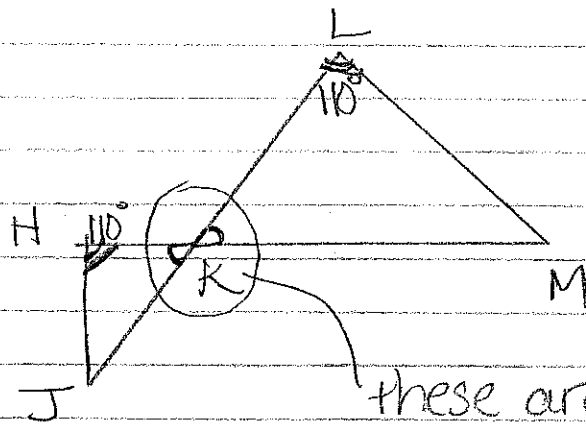
$$\begin{array}{r} 80 \\ + 42 \\ \hline 122 \end{array}$$

$$\begin{array}{r} 180 \\ - 122 \\ \hline 58 \end{array}$$

$$\begin{array}{r} 80 \\ + 60 \\ \hline 140 \end{array}$$

$$\begin{array}{r} 180 \\ - 140 \\ \hline 40 \end{array}$$

Not Similar



these are vertical angles  
same degrees

$$\begin{aligned} \angle JKH &\cong \angle MKL \\ \angle L &\cong \angle H \\ \triangle JKH &\sim \triangle MKL \end{aligned}$$

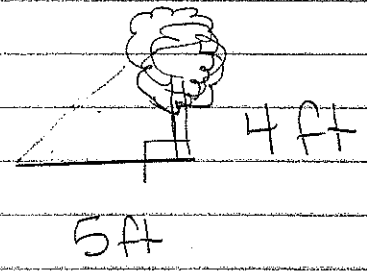
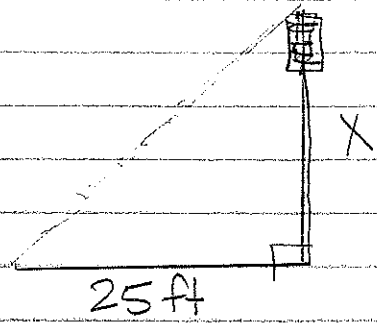
Yes, Similar

(MISSING SIDES)

7.5 cont'd

# INDIRECT MEASUREMENT

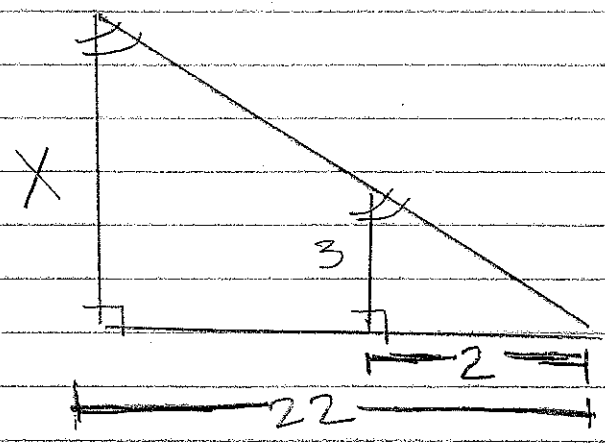
~ shadow reckoning ~



$$\frac{X}{4} = \frac{25}{5}$$

$$\frac{5X}{5} = \frac{100}{5}$$

$$X = 20$$



6/11  
11/11/12

$$\frac{X}{3} = \frac{22}{2}$$

$$\frac{2X}{2} = \frac{66}{2}$$

$$X = 33$$