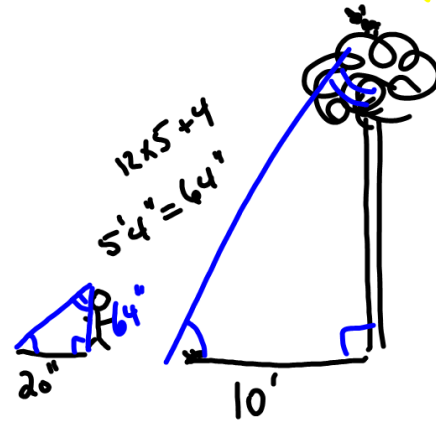


6.4 Prove Similar by Angle-Angle

You need to climb a tree to rescue a cat at the top. You see the tree's shadow is 10 ft, while your 5'4" frame has a 20" shadow. How high must you climb?

All 3 \angle 's are \cong ,
So similar Δ 's



$$\frac{\text{height}}{\text{Shadow}} = \frac{\text{height}}{\text{Shadow}} \quad \left\{ \quad \frac{\text{Shadow}}{\text{height}} = \frac{\text{height}}{\text{Shadow}} \right.$$

$$\frac{x}{10} = \frac{64}{20}$$

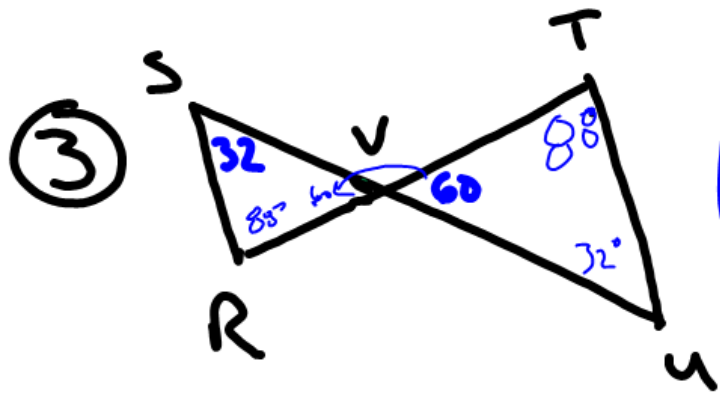
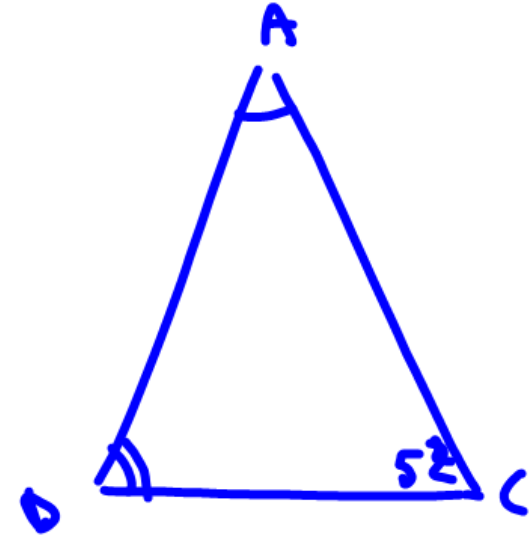
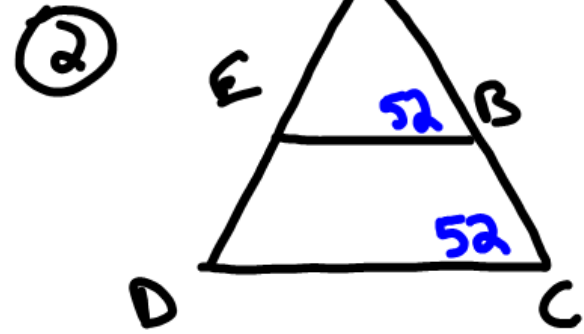
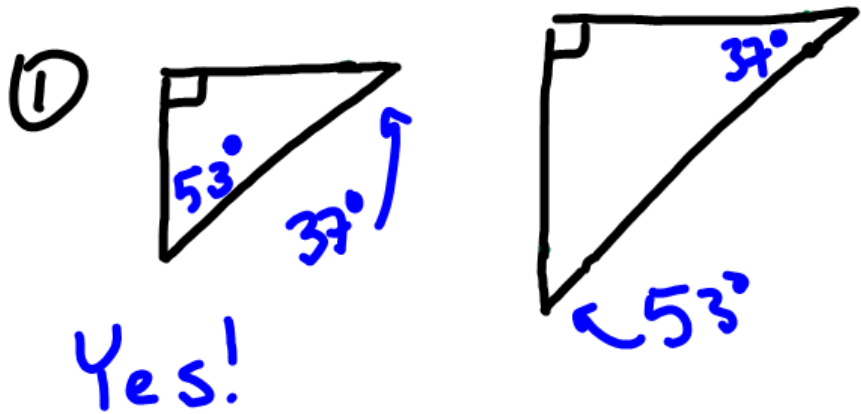
$$\frac{20x}{20} = \frac{640}{20}$$

$$x = 32'$$

Tree is 32 ft tall!

$x = 32$ Climb 32 feet

Are the Δ 's similar?



YES!