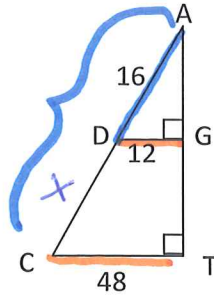


More Similar Triangles :

Ex 1:



AA similarity

a). Explain why $\triangle CAT \sim \triangle DAG$.

By AA Similarity
 $\angle T \cong \angle AGD$ and $\angle A \cong \angle A$
 Reflexive

b). What is the measurement of CD?

$$\frac{CT}{DG} = \frac{AC}{AD}$$

$$\frac{48}{12} = \frac{x+16}{16}$$

$$16 \times 48 = 12(x+16)$$

$$768 = 12x + 192$$

$$576 = 12x$$

$$48 = x$$

Indirect Measurement:

Ex 2: A flagpole that is 11 feet tall casts a 5 and a half foot shadow. At the same time of day, a nearby building casts a 10 ft, 7 in shadow. How tall is the building?



Convert to inches!

$$\frac{132}{x} = \frac{66}{127}$$

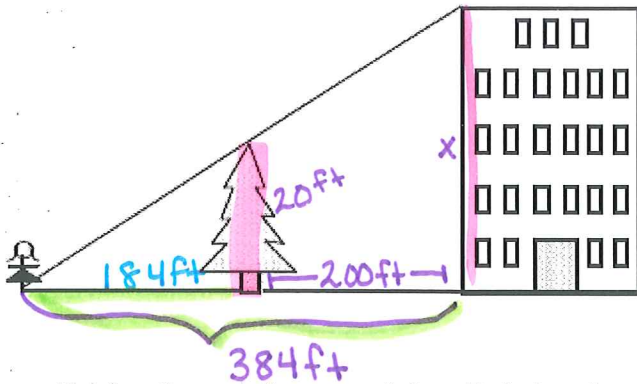
$$66x = 16764$$

$$x = 254 \text{ in}$$

21ft and 2in

Ex 3:

Anna wants to find the height of the tallest building in her city. She stands 384 feet away from the building. There is a tree 200 feet in front of a building that is 20 feet tall. How tall is the building to the nearest foot? **SHOW ALL YOUR WORK.**



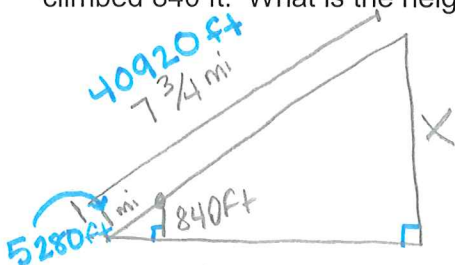
$$\frac{x}{20} = \frac{384}{184}$$

$$184x = 7680$$

$$x \approx 41.739 \text{ ft}$$

$$x \approx 42 \text{ ft}$$

4. Driving through the mountains, Dale has to go up and over a high mountain pass. The road has a constant incline for $7\frac{3}{4}$ miles to the top of the pass. Dale notices from a road sign that in the first mile, he climbed 840 ft. What is the height of the mountain pass? (5280 ft = 1 mile)



$$7\frac{3}{4} \times 5280 = 40920 \text{ ft}$$

$$\frac{x}{840} = \frac{40920}{5280}$$

$$5280x = 34372800$$

$$x = 6,510 \text{ ft}$$