

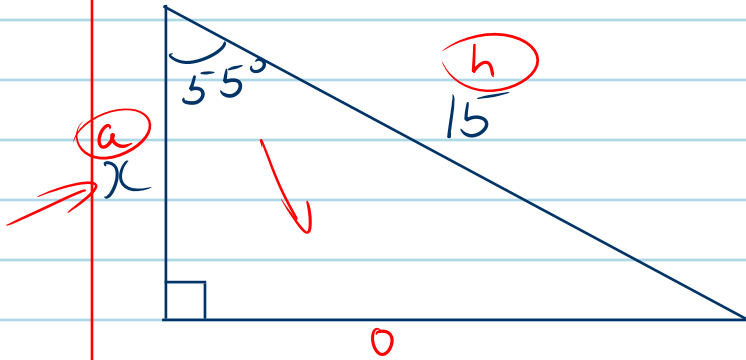
# Unit 6 Day 7

## 6-5 Triangle Area

June 7th, 2016

Review:

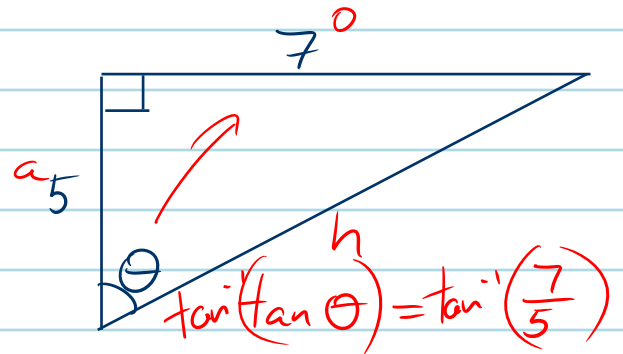
- 1) Solve for  $x$ : SohCahToa 2) Solve for  $\theta$



$$15 \cos 55^\circ = \frac{x}{15} \cdot 15$$

$$x = 15 \cos 55^\circ$$

$$x \approx 8.6$$



$$\tan(\tan \theta) = \tan\left(\frac{7}{5}\right)$$

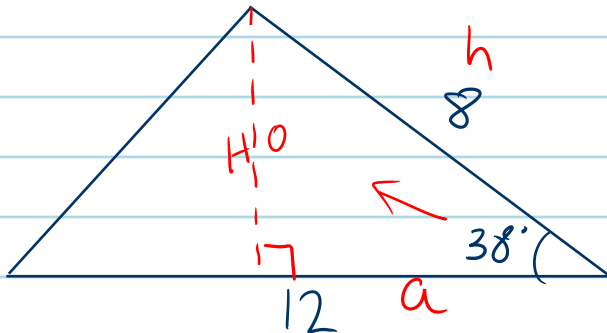
$$\theta = \tan^{-1}\left(\frac{7}{5}\right)$$

$$\theta \approx 54.5^\circ$$

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## Triangle Area

- 3) Find the area of the triangle below:



$$A = \frac{1}{2} bH = \frac{bH}{2}$$

$$\sin 38^\circ = \frac{H}{8}$$

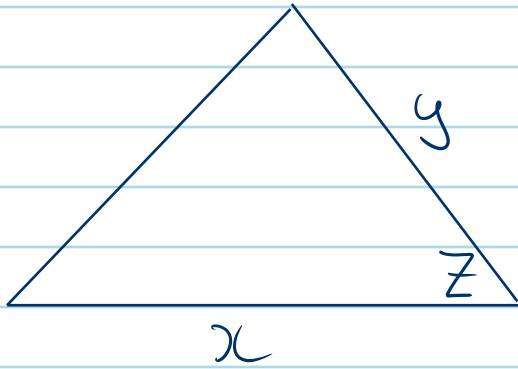
$$H = 8 \sin 38^\circ$$

$$A = \frac{1}{2} b \cdot H$$

$$A = \frac{1}{2} (12) (8) \sin 38^\circ$$

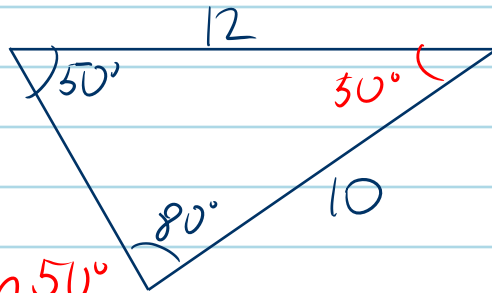
$$A = 48 \sin 38^\circ$$

$$A \approx 29.6$$



$$A = \frac{1}{2}xy \sin Z$$

4) Find the area:



$$A = \frac{1}{2}xy \sin Z$$

$$A = \frac{1}{2}ab \sin C$$

$$A = \frac{1}{2}(12)(10) \sin 50^\circ$$

$$A = 60 \sin 50^\circ$$

$$A \approx 46.0$$

Practice 6-7