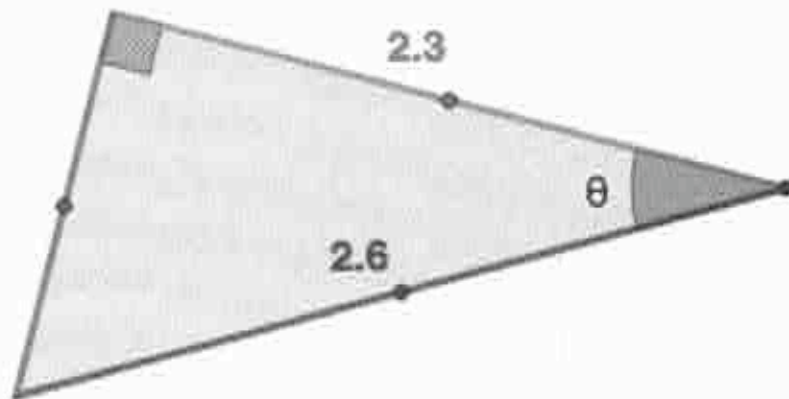


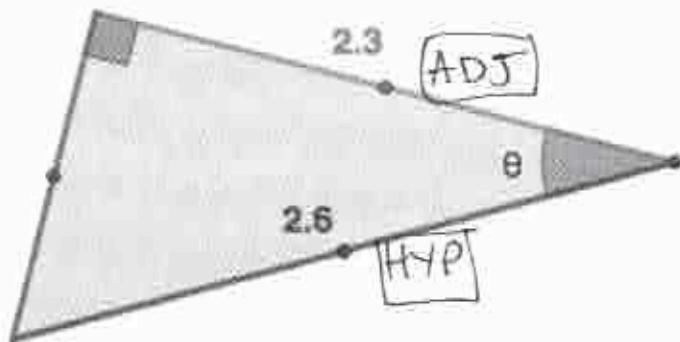
SOH CAH TOA for finding an angle on a right angled triangle

Example 1: Calculate θ

Estimate by sight
- between 30° and 40°



Draw and label triangle, choose formula and solve



2.3 is adjacent to θ
2.6 is the hypotenuse
This is an ADJ, HYP
problem,
that is, an A, H problem
SOH CAH or TOA?
Choose CAH.

$$\cos \theta = \frac{\text{adj}}{\text{hyp}}$$

$$\cos \theta = \frac{2.3}{2.6}$$

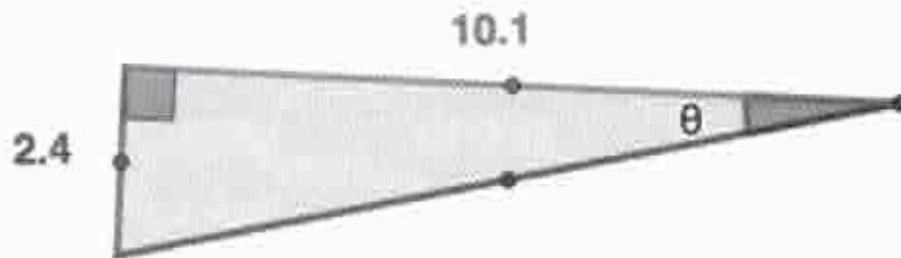
$$\theta = \cos^{-1} \left(\frac{2.3}{2.6} \right)$$

$$\theta = 27.89577\dots$$

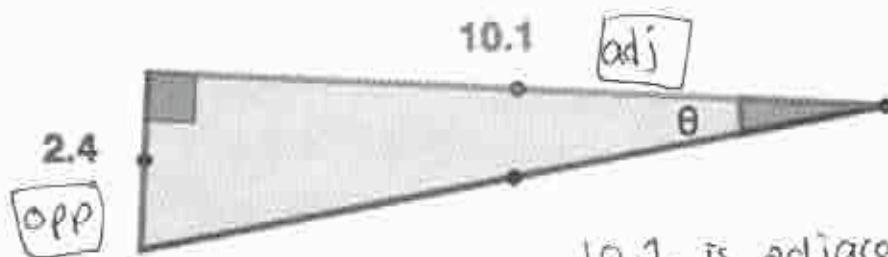
$$\theta = 28^\circ \text{ (nearest degree)}$$

Example 2: Calculate θ

Estimate
~ 20-ish degrees



Draw and label triangle, choose formula and solve



10.1 is adjacent to θ
2.4 is opposite θ

This is an ADJ, opp problem,
that is, an A, O problem

SOH, CAH or TOA

Choose tangent, TOA.

$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$

$$\tan \theta = \frac{2.4}{10.1}$$

$$\theta = \tan^{-1}\left(\frac{2.4}{10.1}\right)$$

$$\theta = 13.3669\dots$$

$$\theta = 13^\circ \text{ to the nearest degree,}$$