

For each of the following examples, draw a diagram of the right triangle, labeling an acute angle as θ and the appropriate sides as OPP, ADJ, HYP.

Example 1:

Given $\tan\theta = \frac{24}{7}$, find the ratio $\cos\theta$.

Example 2:

Given $\sin\theta = \frac{5}{6}$, find the ratio $\cos\theta$.

Example 3:

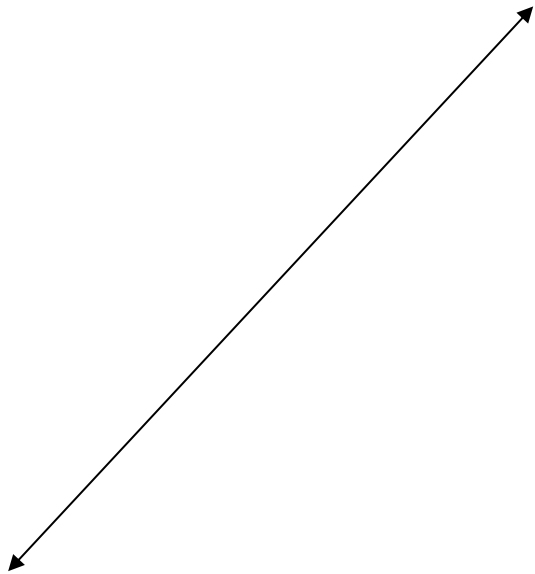
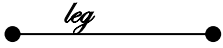
Given $\cos\theta = \frac{\sqrt{3}}{2}$, find the ratios $\sin\theta$ and $\tan\theta$.

→ Think back to earlier lessons – what do you think the measure of θ is for example 3? _____

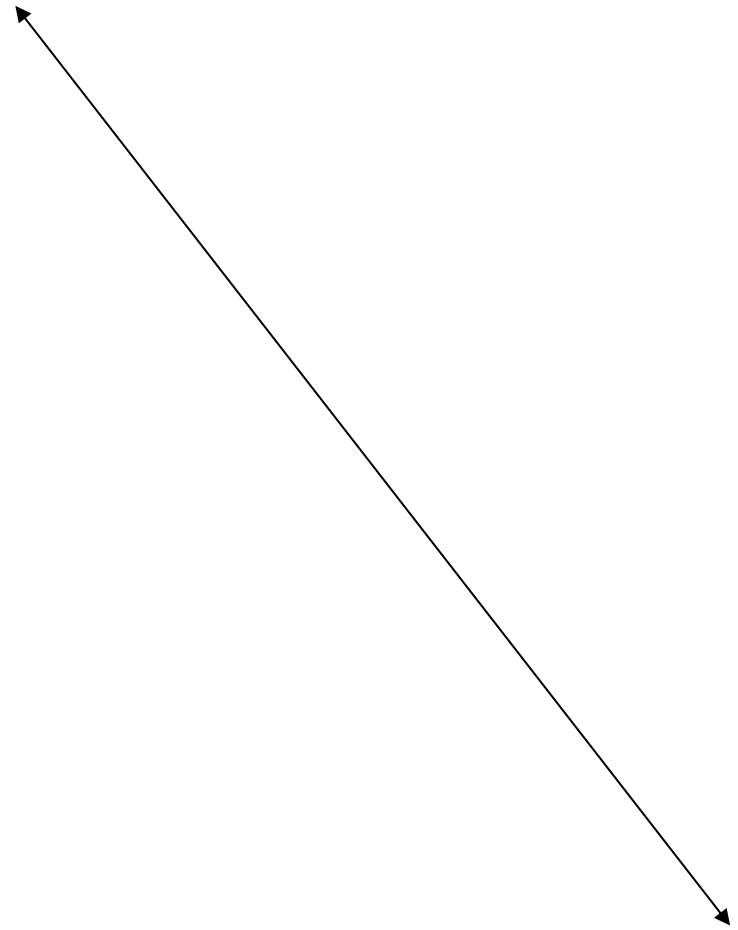
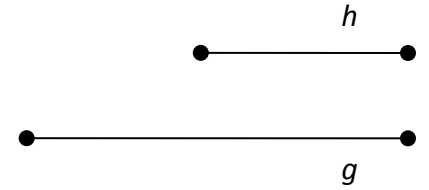
Why? _____

Constructions Practice:

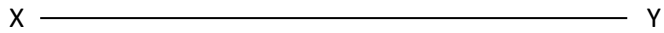
A) Construct an isosceles right triangle with the given leg length.



B) Construct a scalene right triangle with the given leg lengths g & h .



C) Construct a 30° - 60° - 90° right triangle AYZ in an equilateral triangle XYZ.



Explain why your construction justifies that you made a 30° - 60° - 90° right triangle.

D) Explain why you can construct an isosceles right triangle as a way to construct a 45° - 45° - 90° special right triangle: