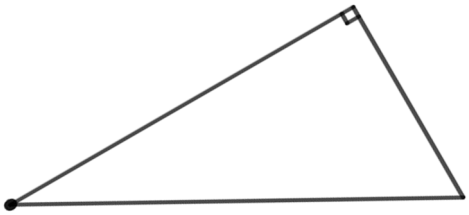
Name: _____ Date: _____

Learning Goal 2.2	Using trigonometric ratios and solving simple trigonometric equations.

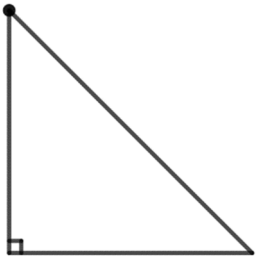
Did you ever wonder where does the word “hypotenuse” comes from?

Warmup In each of the following triangles label the sides: Opposite, Adjacent, Hypotenuse from the point of view of angle labeled.

a.

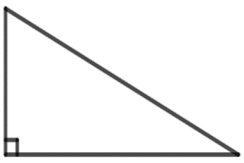


b.



Summary:

Calculator Check:



Example Use your calculator to find each of the following **ratios**, round your answer to the nearest thousandth.

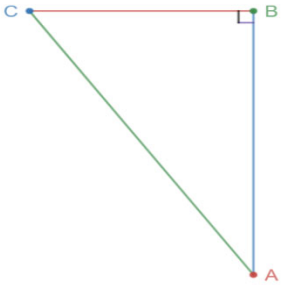
a. $\sin 45^\circ$ b. $\tan 20^\circ$ c. $\cos 17^\circ$ d. $\tan 60^\circ$

Example Use your calculator to find the indicated angle, round your answer to the nearest degree.

e. $\tan\theta = 1.923$ f. $\sin\theta = 0.345$ g. $\tan\theta = 0.234$ h. $\cos\theta = 0.922$

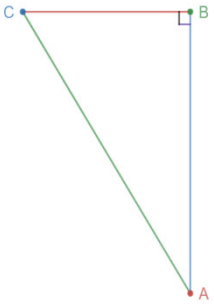
Example Find the length of AB (round to nearest hundredth).

a. $AC = 8$ cm
$\measuredangle A = 18°$



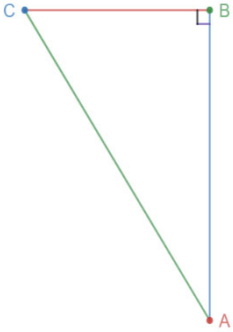
Example Find the measure of angle A (round to the nearest degree).

a. $AB = 6$ mm
$AC = 9$ mm



Example Solve ΔABC. Round lengths to nearest hundredth and angles to the nearest degree.

a. $AC = 5$ cm
$\measuredangle C = 34°$



b. $AC = 15$ cm
$BC = 12$ cm