

## Today's Learning Goal(s):

By the end of the class, I will be able to:

- state the 3 primary trig ratios for a right triangle.
- solve a right triangle using trigonometry.

### 5.1.1 Reviewing the Primary Trigonometric Ratios to Solve Right Triangles (SOH CAH TOA)

Reminders:

Make sure your calculator is in DEGREE mode.

Date: Apr. 24/18

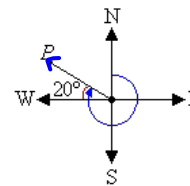
Unless otherwise stated, round sides to **three** decimal places, and angles to **two** decimal places.

Use capital letters for vertices, and lower case letters for the sides of a triangle.

Bearing refers to the angle between due north and the line of travel of an object measured in degrees in a clockwise direction. For example, in the diagram below right, the bearing of point P is 290

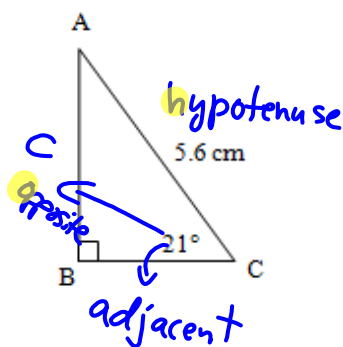
Generally speaking, there are 3 types of trig equations to solve:

- the variable is on the top
- the variable is on the bottom
- the variable is the angle (use an inverse trig operation on your calculator)



Examples

- a) Determine the length of c.



SOH CAH TOA

$$\sin 21^\circ = \frac{c}{5.6}$$

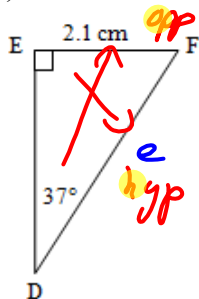
$$c = 5.6 \sin 21^\circ$$

$$\approx 2.0068$$

$$\approx 2.007 \text{ cm}$$

[W 20° N]  
[N 70° W]

- b) Determine the length of e.



SOH

$$\sin 37^\circ = \frac{2.1}{e}$$

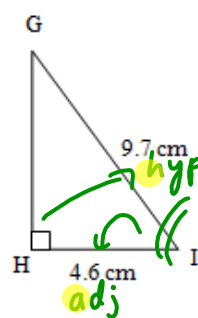
$$e \sin 37^\circ = 2.1$$

$$e = \frac{2.1}{\sin 37^\circ}$$

$$\approx 3.4894$$

$$\approx 3.489 \text{ cm}$$

- c) Determine the measure of  $\angle I$ .



CAH

$$\cos I = \frac{4.6}{9.7}$$

$$I = \cos^{-1}\left(\frac{4.6}{9.7}\right)$$

$$\approx 61.690$$

$$\approx 61.69^\circ$$

**Be ready for tomorrow's Unit 4 Summative!!**

Tonight's Work is posted on the website  
pp.26-29 2a,3abc,4ef,13,14,16