Learning Outcomes: What should you be able to after watching the videos?

- Video 1: Solving Right Triangles
  - Solve a right triangle given the length of one side and one additional piece of information.
- Video 2: Word Problem Preparation
  - Identify the angle of elevation and angle of depression.
  - Identify directions using the two forms of bearings.
  - Use geometric methods to identify angles.
- Video 3: Word Problems
  - Draw and label a diagram that accurately displays the information from a word problem.
- Video 4: Simple Harmonic Motion
  - Identify the amplitude, period, and frequency of a simple harmonic oscillation from a graph.

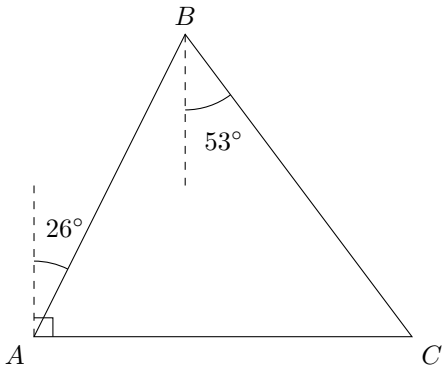
#1) Solve the right triangle with $A = 20°$ and $a = 7$ inches for all unknown sides and angles. Present your work and final answers in an organized manner.

#2) Draw a diagram that matches the following situation and answer the question. A man is standing on a downhill slope whose angle of depression is $10°$. The sun is at an angle of elevation of $20°$. What is the size of the angle between the sun and the slope relative to the man?

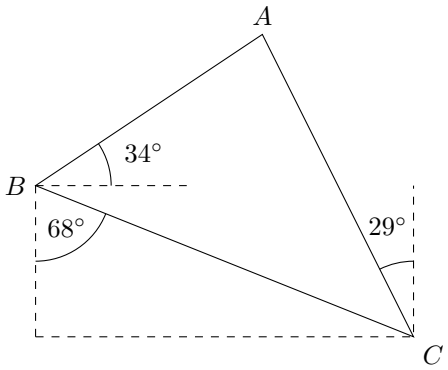
#3) Complete the following charts of directions.

Bearing	N 30° W		S 45° E		N 80° E	
Compass Bearing		130°		200°		340°

#4) Determine the measures of the angles of the triangle from the given information. The vertical dashed lines are parallel to each other.

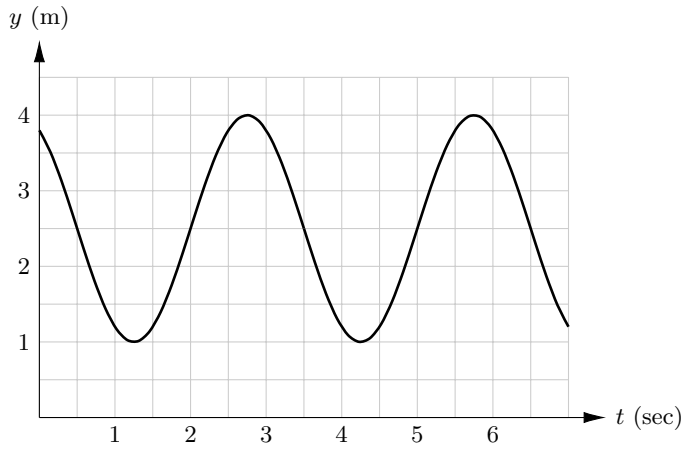


#5) Determine the measures of the angles of the solid triangle from the given information. The dashed lines are either horizontal or vertical.



#6) Draw a diagram to represent the given problem and solve: A boat leaves the dock traveling due east at 25 knots for two hours. It then changes course to N 15° E at 20 knots for another hour. Determine the ship's bearing relative to the port.

#7) Determine the amplitude, period, and frequency of the following vibrating spring-mass system.



Amplitude (in meters) Period (in seconds) Frequency (in 1/seconds)

Was any aspect of any of the videos confusing or unclear? Do you have any questions?