

LAB Creating Sine Curves

Name _____

Now that we have seen the construction of the sine curve, let's examine our findings a bit more carefully. All questions pertain to the conditions under which our constructions occurred.

1. How did you know whether to place the strip above, or below, the x-axis prior to glueing? _____

2. The period of a trig curve is the number of degrees through which the graph passes before it starts to repeat itself. What is the period of our sine curve? _____
3. Where would a triangle corresponding to 390° be constructed? _____

4. True or False: The vertical height of our right triangle at the 30° mark was equal to the sine of 30° (think carefully here!) _____ Explain. _____

5. If you build triangles only at the 15-degree, 30-degree, 45-degree, and so forth, marks, what is the smallest number of *different* triangles that you need to form to obtain the lengths needed to construct the graph of one period of the sine curve?

6. Explain why the vertical strips were forming the sine curve, while the horizontal strips formed the cosine curve. _____

7. Using your calculator, find the $\sin 30^\circ =$ _____ and the $\sin 150^\circ =$ _____
What did you discover about your answers? _____
Explain why this is occurring: _____

