Spaghetti Sine Curves ~ Questions

Name: _____

After you have finished constructing the sine curve, answer the following questions to help clarify the patterns seen and concepts learned during the construction.

1. What is the radius of the circle? _____

2. What is the circumference of the circle? _____

3. Where would a triangle corresponding to 375° be constructed?

_____

4. What is the period of the sine curve? (That is, after how many degrees does the graph begin to repeat itself?) _____

5. Compared with the radius, what is the height of the triangle at 30°? (This number is the SINE of 30°.) _____

6. Compared with the radius, what is the height of the triangle at
    150°? _____   330°? _____   570°? _____

7. Compared with the radius, what is the height of the triangle at
    45°? _____   135°? _____   225°? _____

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

_____

9. Write an explanation to a classmate about why sin 30° equals sin 150°.

_____
_____
_____
_____

10. Now using what you know about the sin curve, sketch the cos curve below.