Math 30-1

Sinusoidal Data

**SPAGHETTI LAB**

**Materials:**

 \* Protractor \* Pencil

 \* Ruler \* Tape

 \* Spaghetti \* Circle Sheet (on second page)

 \* two pieces of legal sized paper

**Instructions:**

1. Use the protractor to mark 15o intervals on the circumference of the circle,

 From 0o to 360o.

2. Tape a sheet of legal size paper (8.5” x 14”) to the right side of your circle paper,

 Making a sheet that is approximately 8.5”x 25”.

3. Extend the line from the circle across both sheets of paper.

4. At the open circle on your line, draw a perpendicular line to the top and bottom of your

 sheet.

5. Mark a horizontal scale on your line using 15 mm to represent 15o, 30 mm to represent

 30o, 45 mm to represent 45o, etc., up to 360 mm representing 360o.

6. On the circle, break a piece of spaghetti to represent the distance from the first tick

 mark to the horizontal line.

7. Tape the spaghetti on the first tick mark on the horizontal scale.

8. Repeat steps 6 and 7 for all the tick marks on the circle, from 0o to 360o. If you measure

 your spaghetti below the horizontal line, then tape it below the horizontal line.

9. Add another sheet of 8 x 14” paper. Continue your spaghetti rotations up to and

 including 7200.

10. Find the following measurements.

 a) Between two consecutive maximums, \_\_\_\_\_\_\_\_\_.

 b) Between two consecutive minimums, \_\_\_\_\_\_\_\_\_.

 c) Between consecutive zeros,\_\_\_\_\_\_\_\_.

 d) From a maximum to a minimum,\_\_\_\_\_\_\_\_.

