

### Trig 6.3

Graphing sinusoids activity (10-15 min)

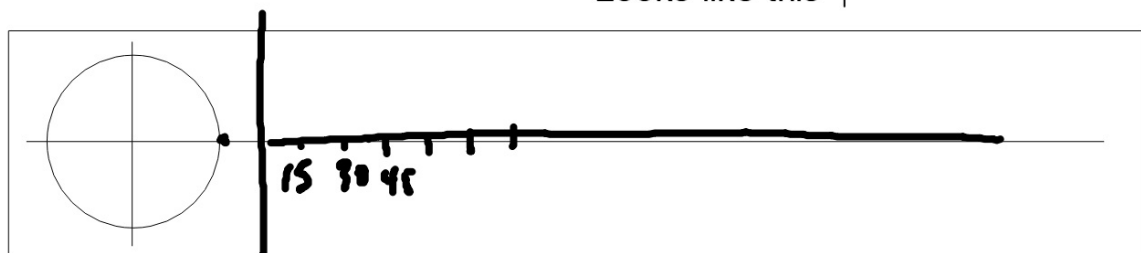
On the left side of the sheet, draw a circle with radius = 1 piece of spaghetti

Add an x and y axis with the origin at the center of the circle

Measure and mark central angles at 15 degree intervals around the circumference of the circle

Wait for instructions

Looks like this |



Quiz 6.1-6.2

Tues.

Wrap a string around the circumference of the circle  
Transfer the 15-degree marks to the string  
Stretch the string along the y-axis  
Transfer and label the marks to the y-axis  
Wait for instructions

Sine:

Use pieces of spaghetti to form a triangle at zero degrees

What is the length of each side? Break off a piece of spaghetti equal to the length of the opposite side.

Transfer the spaghetti to the appropriate place on the y-axis.

Repeat for 15 degrees. Break off a piece of spaghetti equal to the length of the opposite side of the triangle\*

Transfer the piece of spaghetti to the appropriate place on the y-axis  
\*Note: If negative, place the spaghetti below the y-axis

Repeat for each interval (0-360)

Cosine:

Use pieces of spaghetti to form a triangle at zero degrees

What is the length of each side?

Break off a piece of spaghetti equal to the length of the adjacent side.

Transfer the spaghetti to the appropriate place on the y-axis.

Repeat for 15 degrees. Break off a piece of spaghetti equal to the length of the adjacent side of the triangle\*

Transfer the piece of spaghetti to the appropriate place on the y-axis

Repeat for each interval (0-360)

Assignment: group

Finish measuring and adding spaghetti lengths for each 15 degree interval (0-360)

Assignment: individual:

Write a paragraph about where you think this activity is going.