

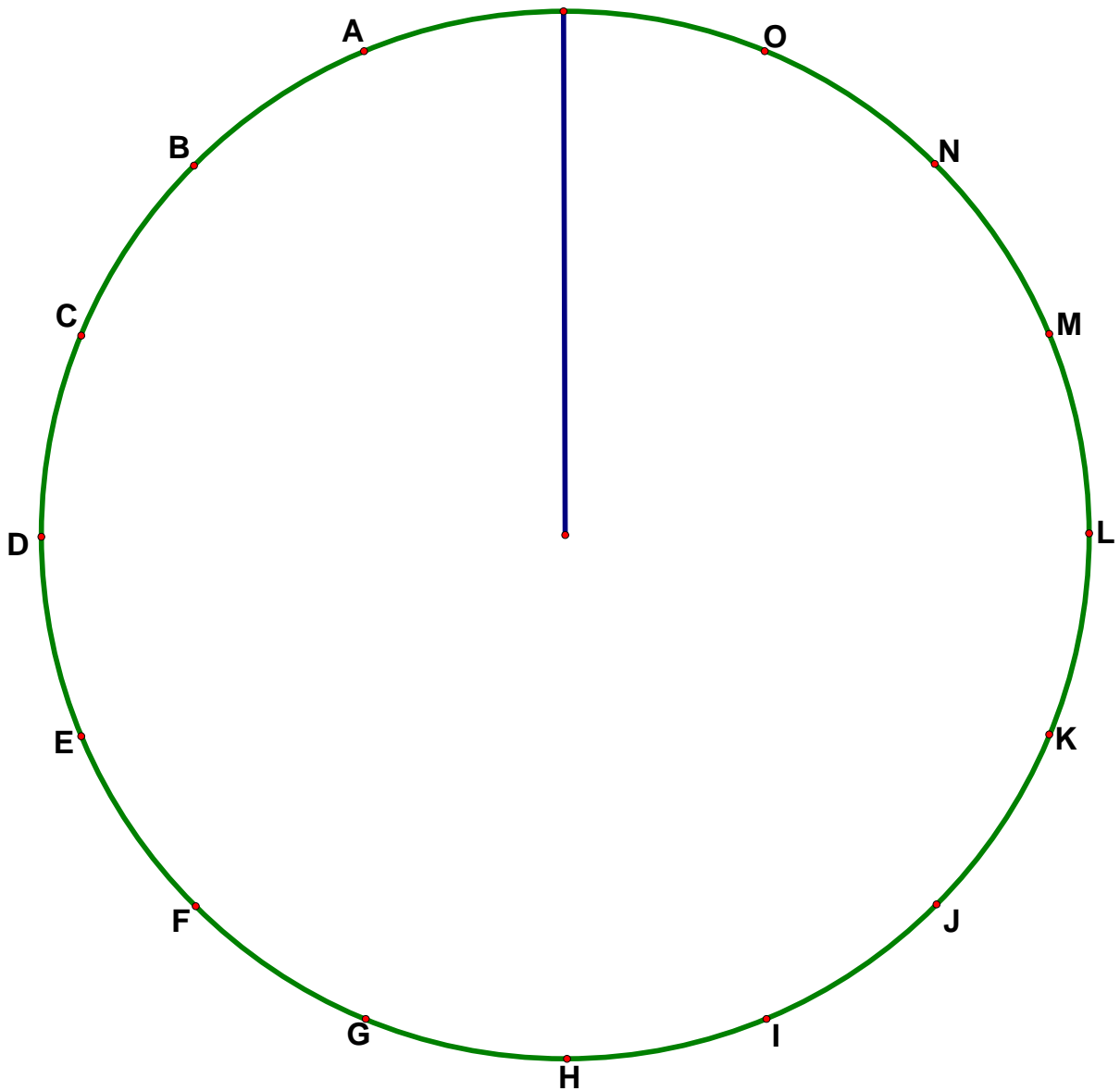
Geo 5.6b

Maximum Cone Volume

To create a cone,

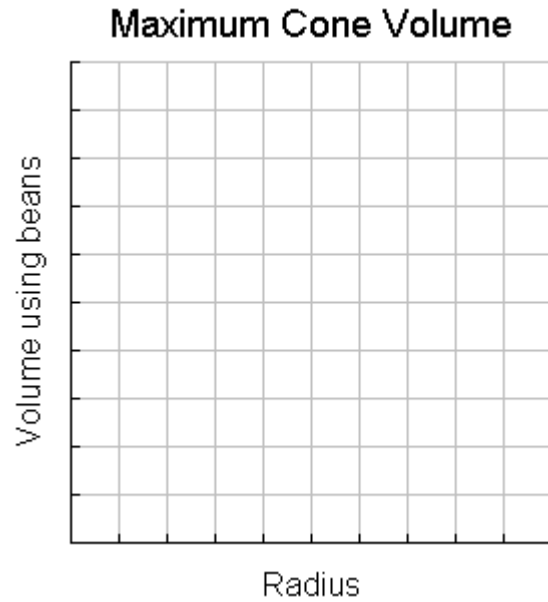
- 1) Cut out the circle below.
- 2) Cut through to the center on the radius line.
- 3) You will slide the radius line to different points on the circle to create cones.

Try the different cones. Predict the cone you believe will have the greatest volume.



- 1) Predict the position which you believe will give your cone the greatest volume.
Paper clip into position. Letter: _____
- 2) Measure to the nearest .5 centimeter, the diameter of the cone in that position. Divide by 2 to find the radius, r. Radius = _____
- 3) Carefully measure to the nearest .5 centimeters, the height, h, of the cone in that same position. Height = _____
- 4) Substitute your values into your formula (from activity 5.6b) to find the volume.
Volume = _____
- 5) Complete the table and then plot your Radius and Volume on the graph below. Label your points with the appropriate letter. Which point has the maximum volume?
_____ How does the data below help you better estimate the position for the maximum volume?

Letter	Radius	Height	Volume
A			
B			
C			
D			
E			
F			
G			
H			
I			
J			
K			
L			
M			
N			
O			



- 6) Make a second prediction for maximum volume. _____
- 7 Use your prior knowledge to solve for the height using the length (l) and the radius (r).
Show all work. h = _____

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- 8) Using the formula for volume of a cone, find your maximum cone volume in cubic centimeters. Show all work. V = _____

