

Activity Pre-Quiz

The problem: A 25-m diameter semispherical segmented dome is going to be constructed (see *Figure 1*). Six equal-length segments will be used to create the revolving line (see *Figure 2*). *Table 1* shows the relative positions of the revolving line vertices. Assuming the dome is a solid of revolution, **find the dome's volume**. Show your work and give the result with three decimal places.

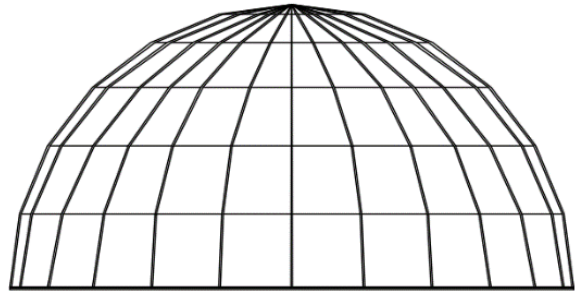


Figure 1

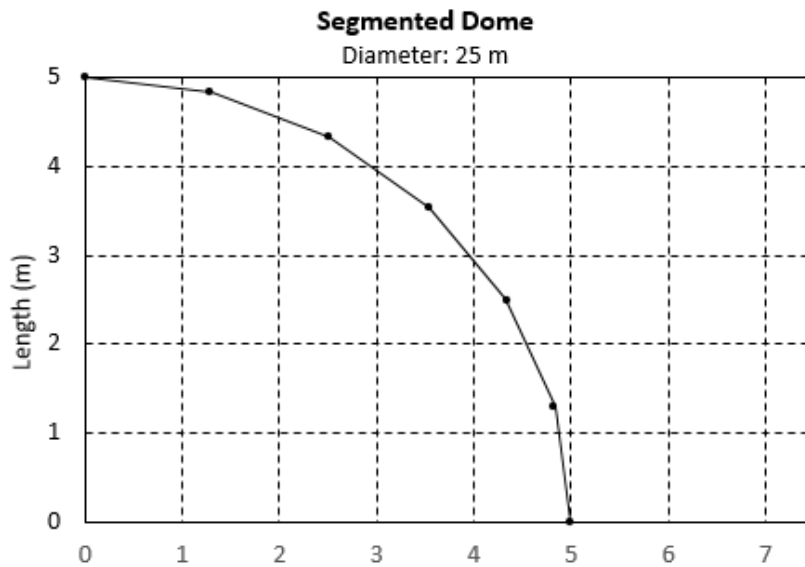


Figure 2

x (m)	y (m)
0.00000	5.00000
1.29410	4.82963
2.50000	4.33013
3.53553	3.53553
4.33013	2.50000
4.82963	1.29410

Table 1