Latex assignment

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The Scenario

You are craving for chocolate cake and want to bake it at home. You drive to safeway to find a pan and there are two of them available. A square cake pan and a circular cake pan both with the same height. The side of the square pan is same as the diameter of the circular pan. How do you decide which pan should you buy in case you want to have more cake.

The Solution

In order to decide on the pan, we compare the volumes of cake baked in a square pan and the circular pan.

Calculations

Volume of square pan is calculated as follows:

$$a^2h$$

In this case

''a" = 9 inches (length of side)

''h" = 2 inches (depth)

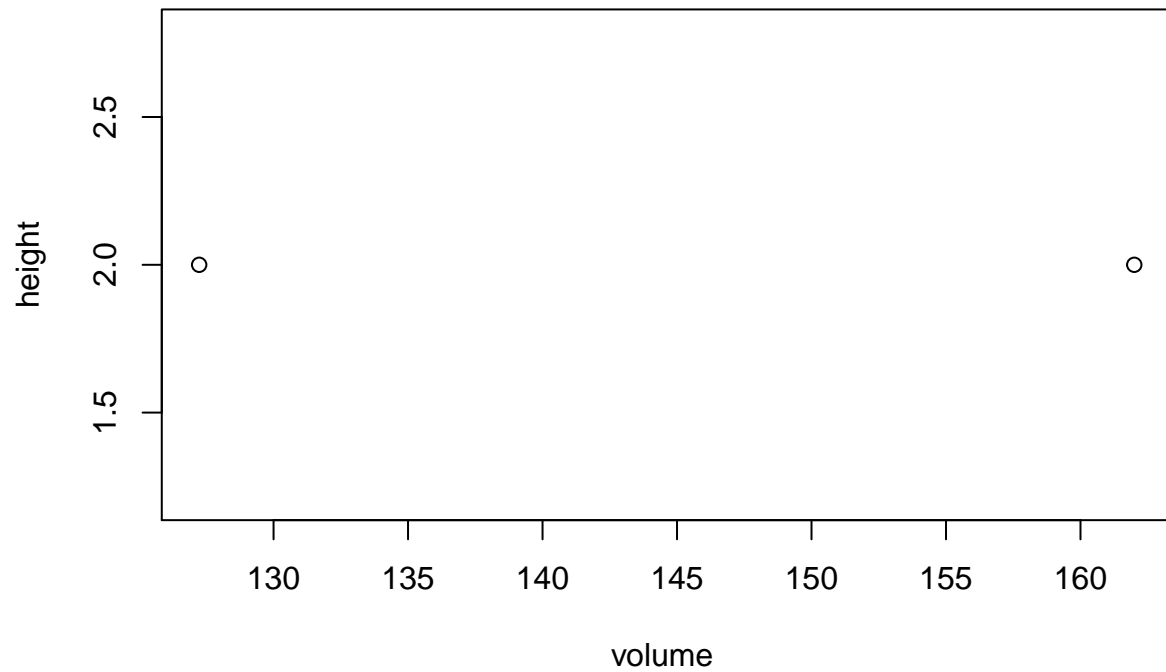Volume of circular cake pan is calculated as follows:

$$\pi r^2 h$$

In this case

''r" = 4.5 inches radius of circular face

''h" = 2 inches height

Scatterplot

Conclusion

From the plots and calculation it is evident that volume of a square pan (162 cubic inches) is more than a circular pan (127.2 cubic inches). Hence, in case you want to have a bigger cake, do not hesitate to choose the square cake pan.