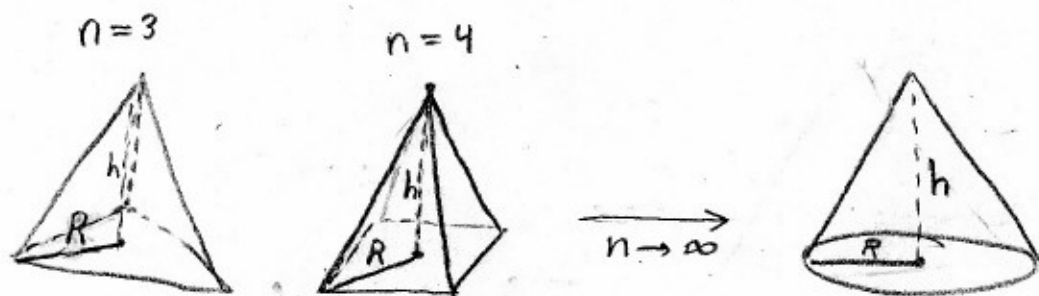


BONUS PROJECT: PYRAMID  $\rightarrow$  CONE (5 pts.)

Calculate the volume of a regular  $n$ -sided pyramid of height  $h$ . Once you find that volume take the limit as  $n \rightarrow \infty$  and compare your result to the volume of a cone.

Hints: if you wish to minimize the amount of original thinking you should pay special attention to pg. (83) as well as the examples in notes about the triangular & square Pyramids. Additionally, I believe I've posted a sol<sup>n</sup> for the 5 or 6 sided pyramid. Notice, you'll want to characterize the volume in terms of the "radius" of the pyramid.



(Should take  $h$  &  $R$  as fixed, but arbitrary values.)