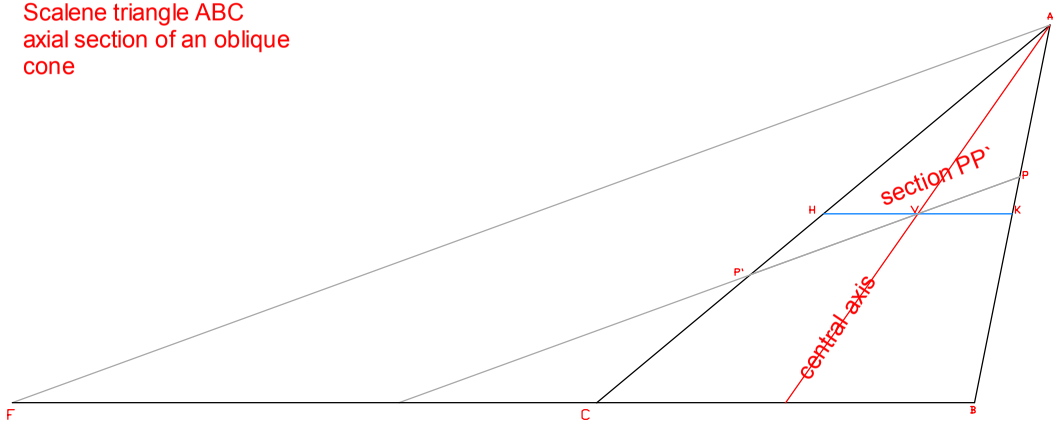
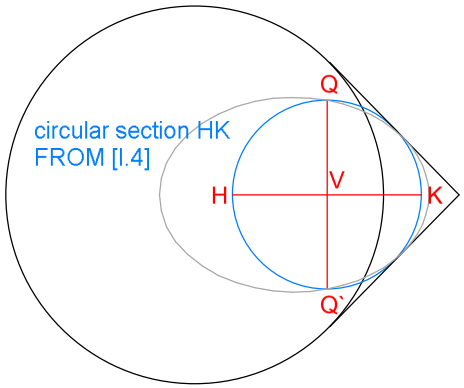
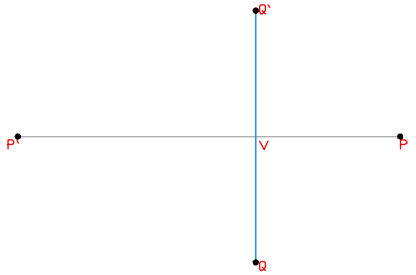
STEP 1

Scalene triangle ABC
axial section of an oblique cone



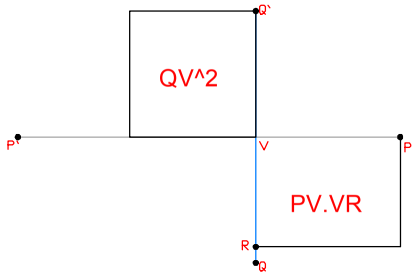




STEP 2

I've got 4 known points on the section:
P, P`, Q and Q`

QV = Q`V = HV = VK

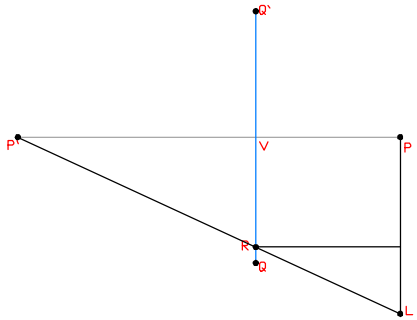


STEP 3

Is QV proportional to PV - no way

Apollonius would have studied the circle
therefore QV^2 maybe proportional to PV

Try QV^2 = PV.VR therefore
we can find point R



STEP 4

Join up P` R to predict L

or
VR:PV' = PL:PP`

QV^2 : PV.PV` = PL:PP'

STEP 5

How the section relates to the axial triangle and thus the cone.

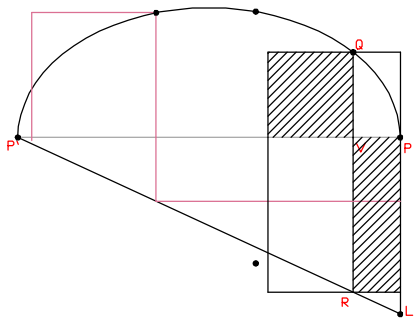
HV:PV = BF:AF SIMILAR TRIANGLES

VK: P`V = FC:AF SIMILAR TRIANGLES

HV.VK:PV.P'V = BF.AC:AF^2

QV^2:PV.P'V = BF.AC:AF^2

PL:PP' = BF.AC:AF^2 RATHER COMPLICATED LOOKING EQUATION



STEP 5

By Varing V from 0 to P'
I can draw the curve

QV^2 = PV.VR

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DRAWING NUMBER PROP I.13