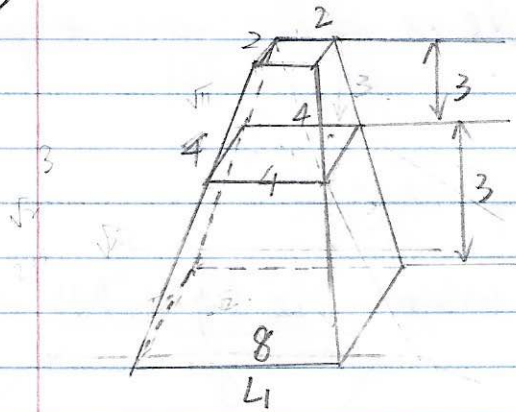


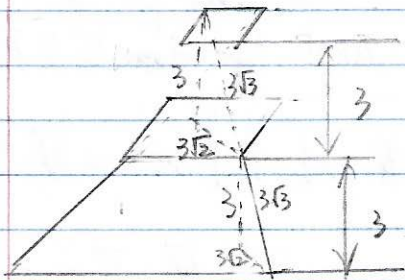
P4



In the umbra condition,

$$L_1 = 8$$

$$A_{\text{umbra}} = 8 \times 8 = 64$$



In the penumbra condition,

$$A_{\text{penumbra}} = (3+4+4)^2 - 64 = 36$$