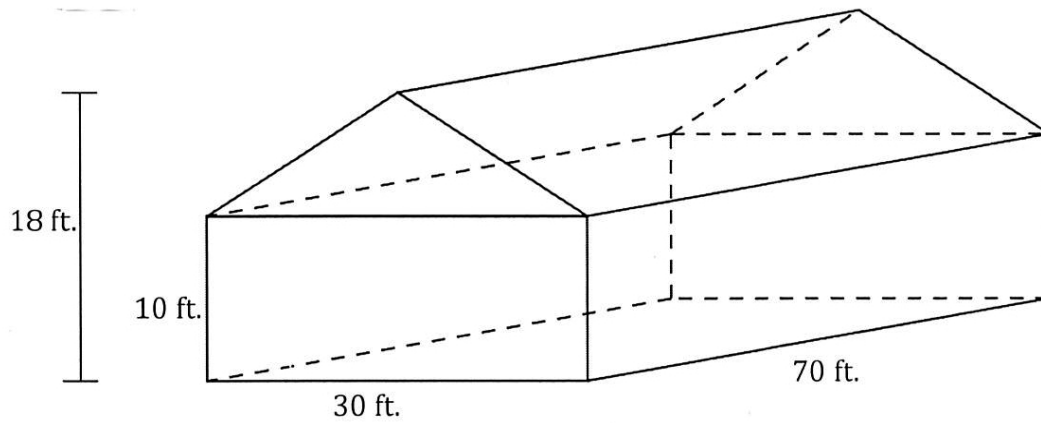


Andrea needs a new air conditioning system for her house. An air conditioner needs to be big enough to cool a house, but it will wear out quickly if it is too big. Calculate the volume of the house pictured below to help Andrea choose the right air conditioner.



$$\begin{aligned}V &= lwh \\ &= (30)(70)(10) \\ &= 21,000\end{aligned}$$

$$\begin{aligned}V &= B^2 + lwh \times 3 \\ &= 240^2 + (70)(8) \times 3 \\ &= 57,600 + 1,680 \\ &= 59,280\end{aligned}$$

$$59,280 + 21,000 = 80,280 \text{ ft}^2$$