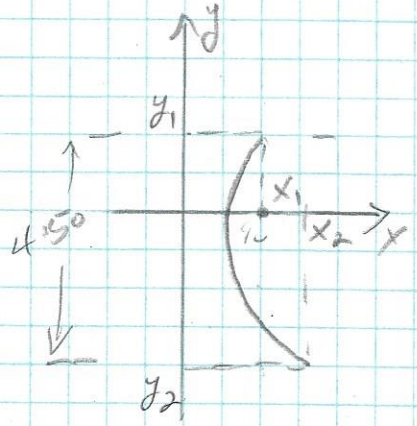
$$\frac{x^2}{90^2} - \frac{y^2}{130^2} = 1 \qquad \text{Given: } y_1 + y_2 = 450$$

$$y_1 = \frac{1}{2} y_2$$



$$\Rightarrow \quad y_1 + 2y_1 = 450 \Rightarrow \underline{y_1 = 150}$$

$$\underline{y_2 = 300}$$

$x_1 = ?$ $\qquad \frac{x_1^2}{90^2} - \frac{150^2}{130^2} = 1$

$$x_1^2 = 90^2 \left(1 + \left(\frac{15}{13}\right)^2\right)$$

$$x_1 = \frac{90}{13}\sqrt{169 + 225}$$

$$= \frac{90}{13}\sqrt{394} \qquad \text{(radius)}$$

$$\underline{\text{Top diameter} = 2x_1 = \frac{180}{13}\sqrt{394} \text{ ft}}$$

For bottom: $\qquad \frac{x_2^2}{90^2} - \frac{300^2}{130^2} = 1$

$$x_2^2 = 90^2 \left(1 + \left(\frac{30}{13}\right)^2\right)$$

$$x_2 = \frac{90}{13}\sqrt{1069}$$

Bottom diameter $= 2x_2$

$$\underline{= \frac{180}{13}\sqrt{1069} \text{ ft}}$$