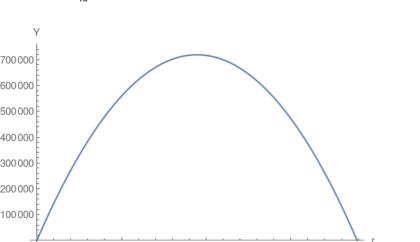
3. (a) When solving for MIN/MAX for a parabola, calculate the vertex:

15000



10000

 $vertex = \frac{-152}{2 \cdot \frac{(-17)}{2}} = \frac{160816}{17}$ 

5000