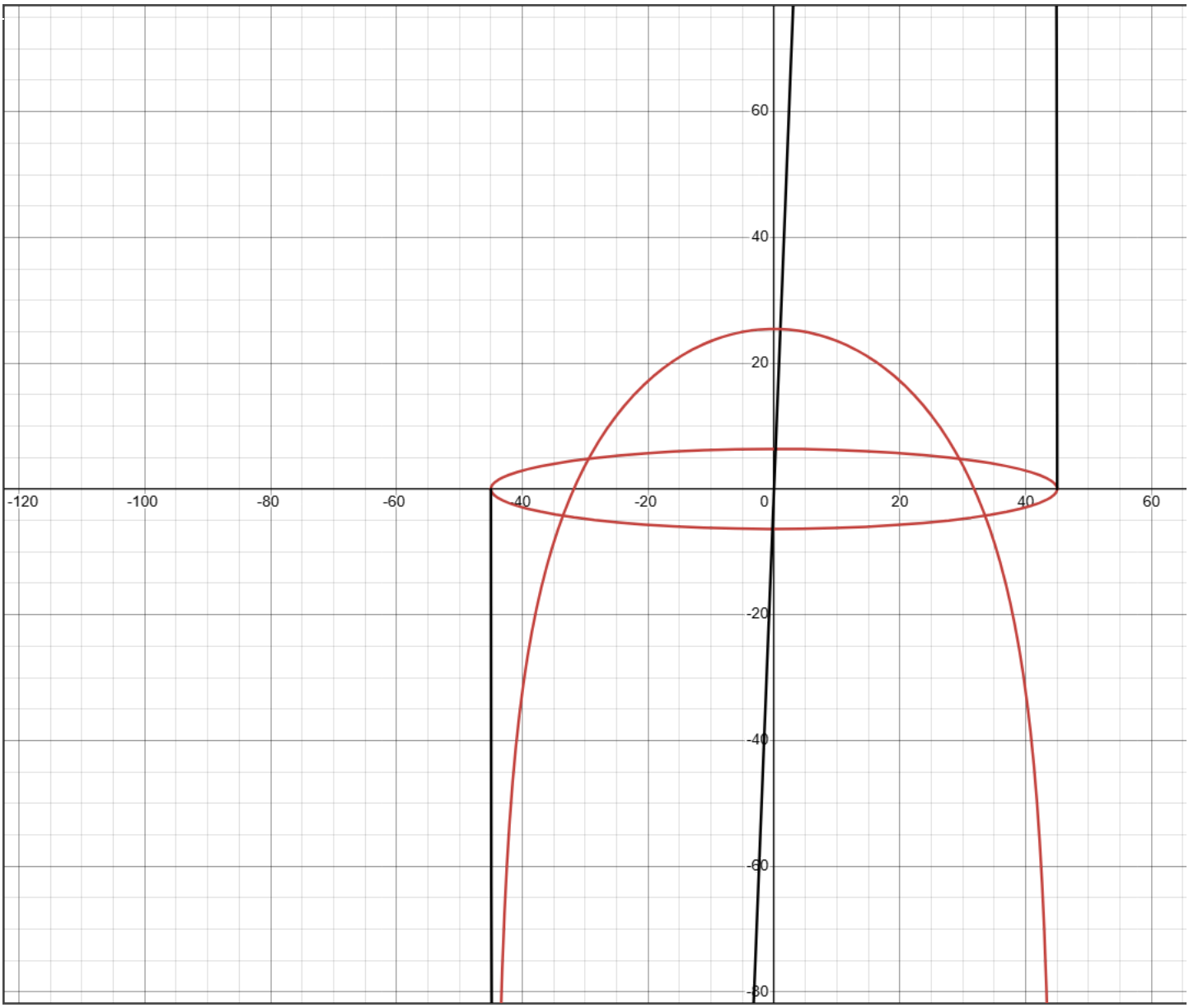

1 $x^2 + ay^2 = 2025$

2 $a = 50$

3 $f(x) = 4x\sqrt{\frac{\left(2025 - x^2\right)}{a}}$

4 $f'(x)$

5 $f(31.81981)$

$= 572.756492761$

6 $b = 31.81981$

7

$$\frac{\left(2025-b^2\right)\left(4^2b^2\right)}{2000^2}$$

$$= 4.100625$$