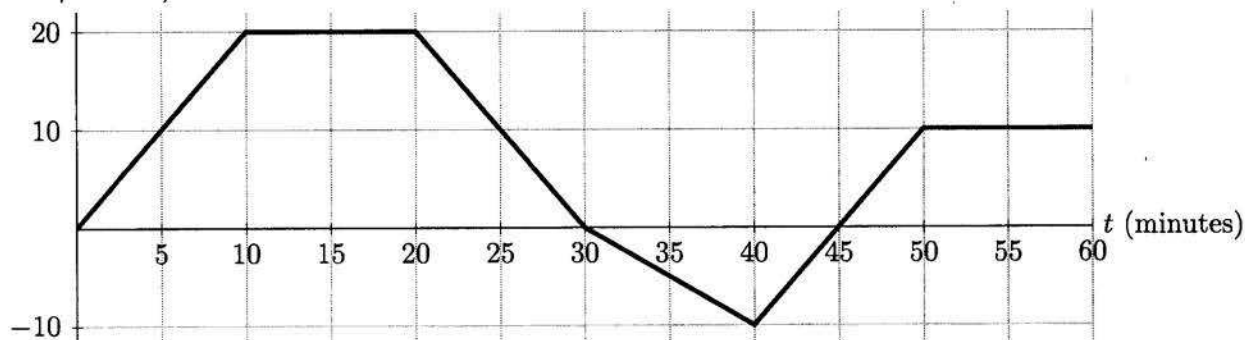


2. [12 points] Erna is a rock climber who is climbing a rock formation. Due to the shape of the formation, the rate at which Erna ascends varies and is given by the graph below.

Vertical Velocity  
(meters/minute)

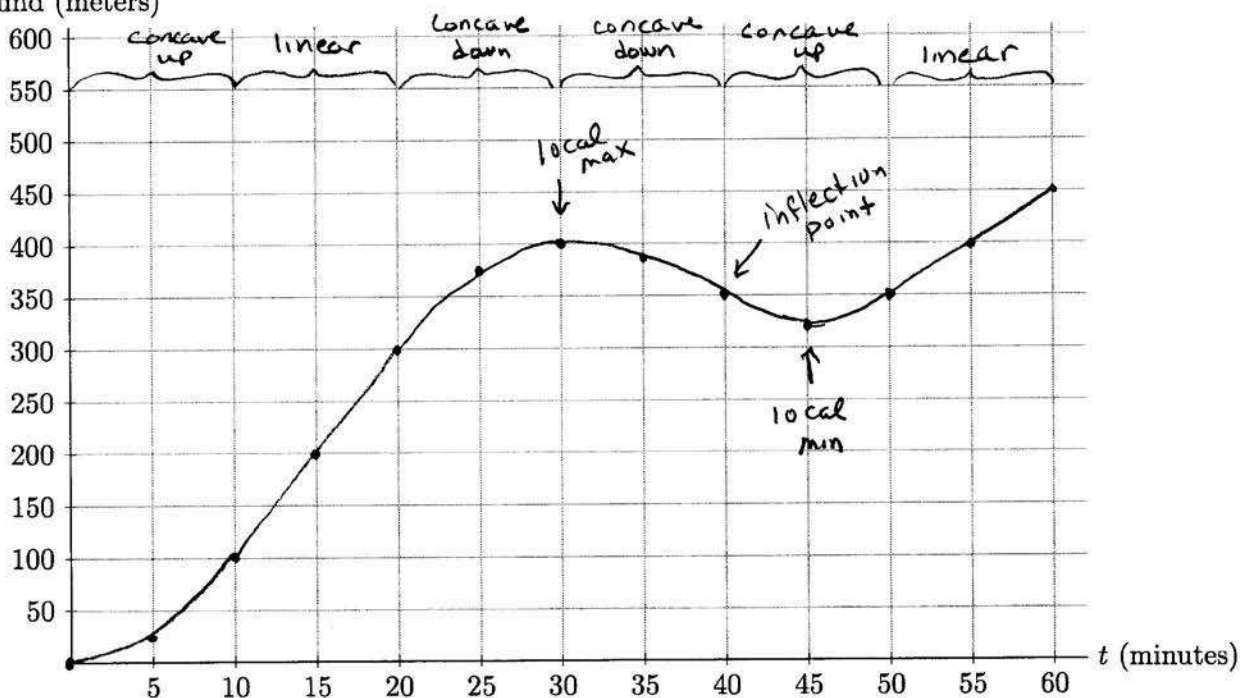


- a. [10 points] Erna starts climbing from the ground at  $t = 0$ , and she reaches the top at  $t = 60$ , where  $t$  is measured in minutes. Use the axes below to carefully sketch a graph of her height above the ground for  $0 \leq t \leq 60$ .

- Clearly indicate the coordinates of the points on your graph at  $t = 0, 10, 20, 30, 40, 50$ , and  $60$ .
- Be sure that local extrema and concavity are clear.

$$1 \text{ Box} = (5 \text{ min}) \left( 10 \frac{\text{m}}{\text{min}} \right) = 50 \text{ m}$$

height above  
ground (meters)



- b. [2 points] How tall was the rock formation that Erna climbed?

Answer: Height of Rock Formation = 450 meters