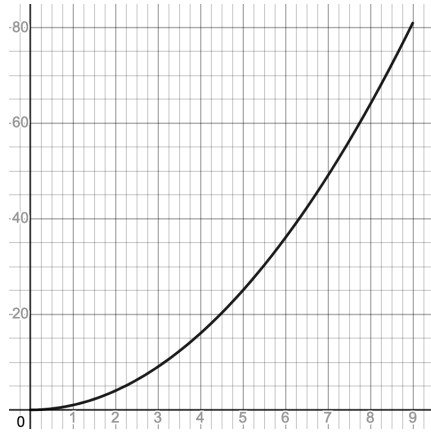


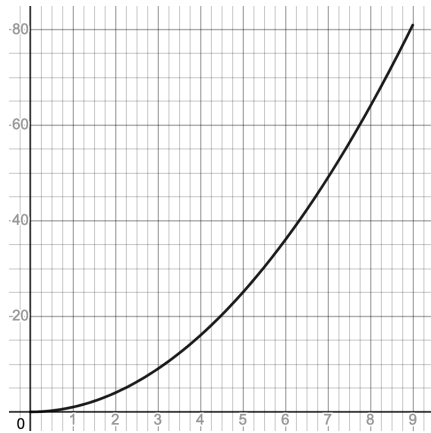
§5.1 (PART 1): AREA, DISTANCE, AND RIEMANN SUMS

1.] Approximate the total distance traveled over 9 hours if the velocity function is given by $v(t) = t^2$.

a.) Use $n = 3$ rectangles to approximate the area with right-hand endpoints.



b.) Use $n = 9$ rectangles to approximate the area with right-hand endpoints.



c.) Use $n = 18$ rectangles to approximate the area with right-hand endpoints.

2.] Calculate the following values using summation notation:

$$a.) \sum_{k=1}^6 k$$

$$b.) \sum_{k=1}^n 5$$

$$c.) \sum_{k=1}^4 (2k + 1)$$

$$d.) \sum_{k=1}^2 (k^2 + k)$$

3.] Calculate the following values using rules and identities associated with summation notation:

$$a.) \sum_{k=1}^6 k$$

$$b.) \sum_{k=1}^5 (3k - 1)$$

$$c.) \sum_{k=1}^7 (k^3 + 2k)$$

$$b.) \sum_{k=1}^{400} k^2$$