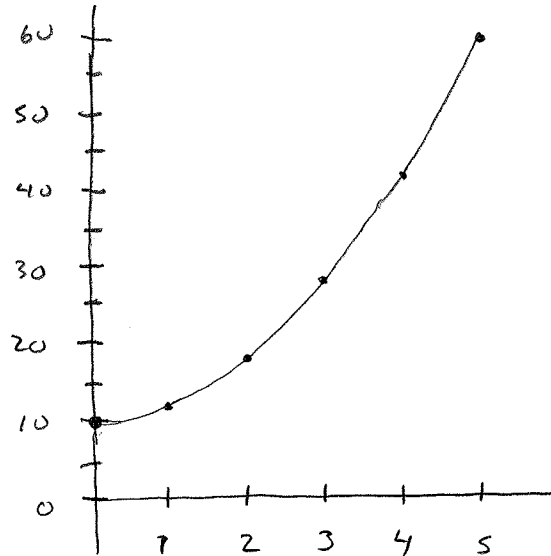


① $x(t) = 10 + 12t^2$

x	t
0	10
1	12
2	18
3	28
4	42
5	60

(a)

(b)



(c) $x_i = 18$
 $x_f = 60$

(d) distance is 42 m
 displacement is +42 m

(e) total + trick question. The answer is technically no, because distance is a scalar and displacement a vector.

② distance = 12 km ← scalar
 displacement = (2 km, West) ← vector
 ↑ ↑
 magnitude direction