8. David is living on the 37th floor of a fancy building. He wants to get rid of an ancient (very energy inefficient) refrigerator that was in the building before alterations were made to the apartment. The box will not fit through the new doors of the apartment, so the refrigerator must be pushed down a rather rickety ramp out the window. The ramp is 350 feet long. Below is a table showing the distance from the window along the ramp at given times:

time (seconds)	0	2	4	6	8	10	12	14	16
distance from window (feet)	0	3.9	18.6	43.1	79.4	122.5	174.6	240.1	313.6

Suppose $s(t) = d$ is the distance from the window, in feet, as a function of time, t, in seconds.

(a) (3 points) Compute the average velocity of the refrigerator over the time interval $4 \leq t \leq 12$.

(b) (4 points) Approximate the instantaneous velocity of the refrigerator when $t = 8$ seconds.

(c) (3 points) Approximately where will the refrigerator be after 18 seconds? Justify your answer.

(d) (4 points) Based upon the information in the table, does s appear to be concave up or concave down at $t = 8$? Justify your answer.