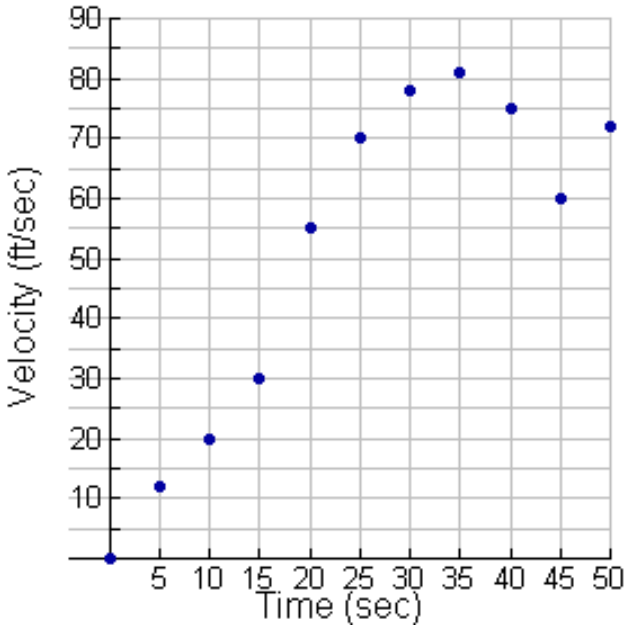

t (seconds)	$v(t)$ (ft/sec)
0	0
5	12
10	20
15	30
20	55
25	70
30	78
35	81
40	75
45	60
50	72

The graph of the velocity $v(t)$, in feet per second, of a car traveling on a straight road, for $0 \le t \le 50$, is shown above. A table of values for $v(t)$, at 5 second intervals of time t, is shown to the right of the graph.

1. Sketch a "smooth" curve through the data points on the graph. (A "smooth" curve is one that is differentiable.)

2. What does the slope of the curve mean in the context of this situation? What units would be used to measure slope?

3. What does the area on the grid mean in the context of this situation? What units would be used to measure area on this grid?

4. Approximate how far the car traveled in the first 15 seconds.

5. Estimate how far the car traveled in the first 50 seconds.

6. Provide an interval within which you are certain the car's total distance traveled must lie. That is, give a minimum and maximum distance that you are certain the total distance is between.