

MA 181 SECTION 2.1 THE TANGENT & VELOCITY PROBLEMS

1. A car starts from rest and its distance traveled is recorded in the table in 2-second intervals.

t(seconds)	0	2	4	6	8	10	12	14
distance (feet)	0	8	40	95	180	260	319	373

A. What is the average speed of the car during the first 6 seconds?

B. Estimate the speed of the car at $t = 6$ seconds.

2. The following table contains the car's distance traveled in 1-second intervals.

t(seconds)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
distance (feet)	0	3	8	22	40	54	95	120	180	230	260	280	319	345	373

Estimate the speed of the car at $t = 6$ seconds.

3. The following table contains the car's distance traveled in 0.5-second intervals.

t(seconds)	5.5	6	6.5
distance (feet)	84	95	115

Estimate the speed of the car at $t = 6$ seconds.

4. The following table contains the car's distance traveled in 0.1-second intervals.

t(seconds)	5.9	6	6.1
distance (feet)	94	95	100

Estimate the speed of the car at $t = 6$ seconds.