

4. (10 points) A car initially traveling 80 ft / sec brakes to a stop in 8 seconds. Its velocity is recorded every 2 seconds and is given in the following table:

t (seconds)	0	2	4	6	8
$v(t)$ (ft/sec)	80	52	28	10	0

- (a) Give a good estimate for the distance the car traveled during the course of the 8 seconds. Is your approximation an over or underestimate? How do you know?
- (b) To estimate the distance traveled accurate to within 20 feet, how often should the velocity be recorded?
- (c) Approximate the acceleration of the car 4 seconds after the brakes were applied.