Section 5.1 How we measure distance traveled? (Part 1)

Area under the curve

P 1. Suppose a car is moving with increasing velocity along a straight road. Use the following data to answer the question.

$t(mi)$	0	2	4	6
$v(mi/h)$	10	20	25	40

1. What is the shortest distance the car traveled?

2. What is the furthest the car could have traveled?

3. What is the difference between the two distances?

P 2. Plot the graphs of the previous problems.

P 3. With time t in hours, the velocity of a car, in miles per hour, is given by $v(t) = 5t$. How far does the car travel in 3 hours?