

Mathematics 122

Quiz #25

Name: Key

You must show your work to get full credit.

A car increases speed over an hour. The velocity at certain times are given in the following table

t (in hours)	0	.25	.50	.75	1.00
v (in miles/hour)	45	50	55	65	70

Give an upper, lower and best guess for the distance traveled by this car during the hour.

2 pts Upper estimate: 60

2 pts Lower estimate: 53.75

1 pt Best guess: 56.875

$$\text{Upper estimate} = .25(50 + 55 + 65 + 70) = 60$$

$$\text{Lower estimate} = .25(45 + 50 + 55 + 65) = 53.75$$

$$\begin{aligned} \text{Best guess} &= \text{average of upper and lower} \\ &= \frac{60 + 53.75}{2} = 56.875 \end{aligned}$$