

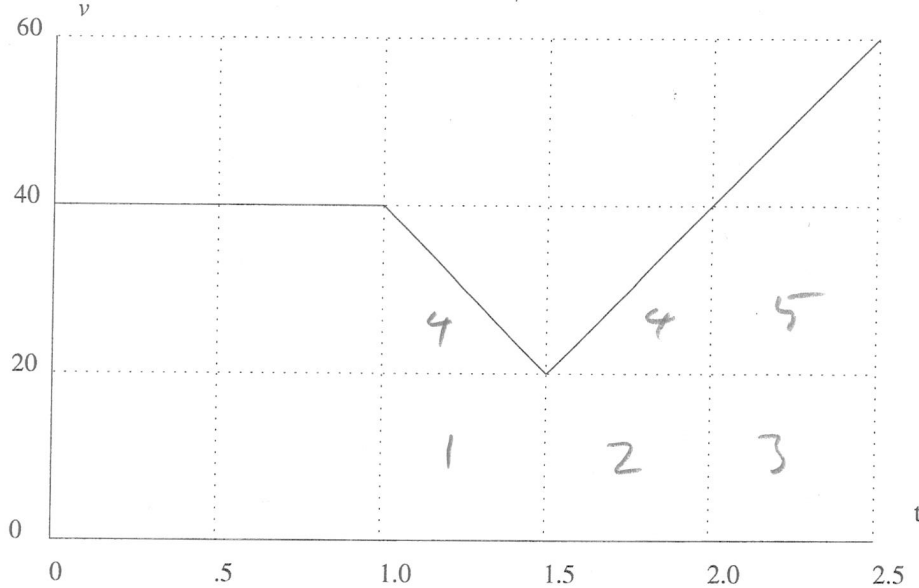
Mathematics 122

Quiz # 18

Name: _____

You must show your work to get full credit.

The following figure shows the velocity, v , in miles/hour of a car as a function of time, t , in hours



1. How much distance traveled is represented by each of the small boxes in the graph?

$$1 \text{ box} = (.5 \text{ hrs})(20 \text{ miles/hr}) \\ = 10 \text{ miles}$$

A box is 10 miles

2. How far did the car travel in the first hour of the trip?

$$\text{This is 1 hour at } 40 \text{ m/hr} \\ = 40 \text{ miles.}$$

Distance traveled 40

$$\text{or This is 4 boxes} = 4(10) = 40 \text{ miles}$$

3. How far did the car travel between $t = 1.0$ and $t = 2.5$?

$$\text{This is } 5.5 \text{ boxes} \\ = (5.5)(10) \text{ miles} \\ = 55 \text{ miles}$$

Distance traveled 55