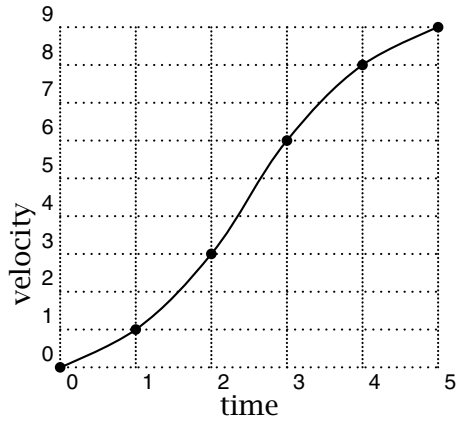
MA 120-12 §5.1 – 5.5	**Quiz #5**	*score*	**Name:** _____ **14 June 2002**

1. The graph shown below is that of the velocity $v(t)$ of an object (in meters/second) at time t (in seconds). The graph was obtained by plotting the indicated points and connecting them with a smooth curve. Using the data points shown, find upper and lower estimates of the total distance covered by the object from 0 to 5 seconds. *(7 points)*



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2. Let $f(x) = x^2$ and $g(x) = \sqrt{x}$. Sketch a graph of the two curves and shade in the bounded region between the curves. Approximate the area of this region. *(6 points)*

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3. The marginal cost $C'(q)$ (in dollars per unit) for producing q units is known for a few values of q as given in the table. If the fixed cost, $C(0) = \$1,000$, estimate as best you can from the data the value of $C(400)$. Explain how you arrive at your estimate and show what you do. *(7 points)*

t	0	100	200	300	400
$f(t)$	20	18	15	18	20