Math 152

Show Your Work! January 10, 2011 Name _____
Good Luck! Quiz #1 A (please print)

1. The table shows some values of y=f(x).

x	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
f(x)	3	4	3	2	1	0	1	2	3	2	1

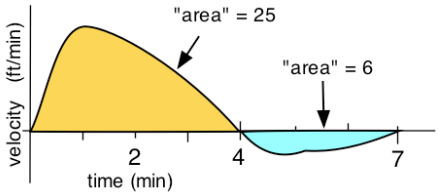
(a) Use the partition P={ 2.0, 3.0, 3.5, 4.0} and c_k = left endpoints to evaluate

$$\sum_{k=1}^{3} f(c_k)\cdot \Delta x_k = \_\_\_\_\_$$ (3)

(b) The MESH of this partition is: mesh = _____ (1)

(c) If the units of x are "hours" and the units of y are "cats" then the units of the Riemann sum in part (a) are _____ (1)

2. An object starts at the origin (x=0) and moves along the x-axis with the velocity shown in the graph.



(1) (a) When is it moving fastest? _____

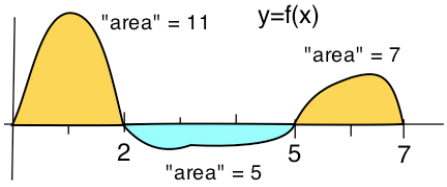
(1) (b) When is it farthest from the origin? _____

(1) (c) Where is the object when t=7? _____

(1) (d) What was the total distance moved by the object? _____

(1) (e) When t=3 the object is moving LEFT RIGHT NEITHER

3. Use the given graph of f to evaluate these integrals (1 point each)



(a) $\int_0^5 f(x)\,dx$ = _____ (b) $\int_0^{10} |f(x)|\,dx$ = _____

(c) $\int_5^7 2f(x)\,dx$ = _____ (d) $\int_0^7 1+f(x)\,dx$ = _____

4. Think "area" to evaluate these integrals: (2 points each)

(a) $\int_0^7 4-x\,dx$ = _____ (b) $\int_0^7 |4-x|\,dx$ = _____ (c) $\int_{1.2}^{3.4} \mathrm{INT}(x)\,dx$ = _____

5. **Define:** $\int_a^b f(x)\,dx = \lim_{mesh\to 0}\{\qquad\qquad\}$ (1)