Subject: Session 20 Problems

Year. Month. Date. ( )

1 (a)

$$\vec{v} = 2ti + 3t^2 j$$

$$|\vec{v}| \text{ @ } t = \sqrt{4t^2 + 9t^4}$$

$$\hat{T} = \frac{2ti + 3t^2 j}{\sqrt{4t^2 + 9t^4}}$$

$$\vec{a} = 2i + 6tj$$

(b) $$\int_1^4 \sqrt{4a t^2 + 9t^4}\, dt$$

2 (a) $$\vec{v} = 3i + 4j$$

$$|\vec{v}| \text{ @ } t = 5$$

$$\hat{T} = 3/5\, i + 4/5\, j$$

$$\vec{a} = 0i + 0j$$

(b) $$\int_0^2 |\vec{v}|\, dt = \int_0^2 5\, dt = 10$$