Math 115 Winter 2010 Exam 2 Answers

1) a) $x^3 \sec^2(x) + 3x^2 \tan(x)$

b) $5 \sec^5(x) \tan(x)$

c) $\dfrac{(2x)(x-7) - (x^2+1)}{(x-7)^2}$

2) a) $t = 0, 3, 8$

b) Forward $(0,3)$ and $(8, \infty)$, backward $(3,8)$

c) Local max at $t = 3$, local min at $t = 8$.

3) a) $64/81$

b) $9/8$

4) a) Achilles

b) No.

c) $27/5$ meters per second