

AME 561

Homework 3

Due: Thursday, 7 September 2000, in class

1. Kaplan, Chapter 8 supplement p. 534: 6f; plot  $y(x)$  if  $y(0) = 1$ .
2. Kaplan, Chapter 8 supplement p. 534: 7ac; plot  $y(x)$
3. Kaplan, Chapter 8 supplement p. 535: 10b; plot families of trajectories
4. Kaplan, Chapter 8 supplement p. 552: 1e; plot  $y(x)$  if  $y(1) = 1, y'(1) = 2$ .
5. Course notes, p. 37: 6; If  $A : (x, y) = (1, 2), B : (x, y) = (0, 0)$ , where the distances are in meters, plot the minimum time curve, and find the minimum time if the gravitational acceleration is  $\mathbf{g} = -9.81 \frac{m}{s^2}\mathbf{j}$ .
6. Course notes, p. 37: 12
7. Course notes, p. 56: 7
8. Course notes, p. 56: 9g
9. Course notes, p. 74: 10
10. Course notes, p. 74: 14