

AME 60611

Homework 2

Due: Friday 6 September 2013, in class

1. Kaplan, p. 105: 2b
2. Kaplan, p. 117: 8b,f
3. Kaplan, p. 121: 3a,b; also plot lines of constant  $u$  and  $v$  in the  $x, y$  plane; plot lines of constant  $x$  and  $y$  in the  $u, v$  plane; find the metric tensor  $\mathbf{G}$ .
4. Kaplan, p. 121: 5
5. Kaplan, p. 159: 5d
6. Kaplan, p. 159: 7
7. Kaplan, p. 166: 6c
8. Kaplan, p. 210: 1b
9. Course notes: 1.18
10. Course notes: 1.19