

AME 60611

Homework 2

Due: Monday 10 September 2007, in class

1. Kaplan, p. 105: 2b
2. Kaplan, p. 116: 3b; plot the surface in  $x, y, u$  space.
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: 6
5. Kaplan, p. 159: 5e
6. Kaplan, p. 159: 6e
7. Kaplan, p. 166: 6a
8. Kaplan, p. 210: 1a
9. Course notes: p. 47, 16,
10. Course notes: p. 47, 17.