

AME 561

Homework 2

Due: Friday 3 September 1999, in class

1. RHB, p. 126: 4.1, plot $z(x, y)$
2. RHB, p. 126: 4.2
3. RHB, p. 126: 4.3, plot $f(x, y)$
4. RHB, p. 126: 4.4, plot $f(x, y)$ for $a = 3$.
5. RHB, p. 128: 4.11
6. RHB, p. 726, 19.1
7. If

$$\frac{x^3 z^2 + y^4 x}{x^2 + z} = \sin z,$$

find $\frac{\partial z}{\partial x}$, $\frac{\partial z}{\partial y}$ and all points for which we cannot form $z(x, y)$.

8. Course notes, p. 38: 16
9. RHB, p. 728, 19.15