Unit 4: Functions

1. Match the graphs with the functions

- $f(x, y) = x + y$
- $f(x, y) = \sin(x - y)$
- $f(x, y) = e^{-x^2+y^2}$
- $f(x, y) = |x| + |y|$
- $f(x, y) = x/(1 + x^2 + y^2)$
- $f(x, y) = e^{-x^2-y^2}$

2. Sketch the contour map in each case.
Unit 4: Quadrics worksheet

1. What is the name of the following surfaces?

- A
- B
- C
- D
- E
- F

2. Match the implicit equations $g(x, y, z) = 0$ with the surfaces.

- $x^2 + y^2 + z^2 = 1$
- $x^2 + y^2 - z^2 = 1$
- $x^2 + y^2 - z^2 = -1$
- $x^2 + y^2 + z = 1$
- $x^2 - y^2 + z = 1$
- $x^2 + y^2 = z^2$