

**MATH 253 – WORKSHEET 6**  
**MULTIVARIABLE FUNCTIONS**

(1) Find the domain of each of the following functions. Draw a diagram!

(a)  $f(x, y) = \sqrt{1 - x^2 - y^2}$

(b)  $g(x, y) = \ln(x + y)$

(c)  $h(x, y) = \frac{1}{x^2 + y^2}$

(d)  $k(x, y) = e^{x^2 + y} + \sin(y^2 + 3x)$