MATH 251: Practice 7

June 3, 2015

Name: _____
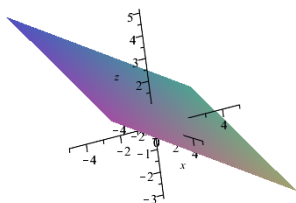
1. Identify the following vector fields
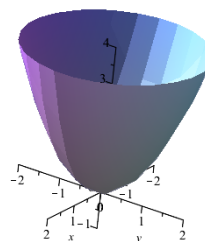
   1. $z = x^2 + y^2$

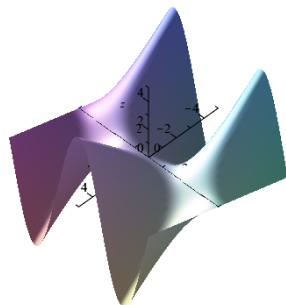   2. $z^2 = x^2 + y^2$

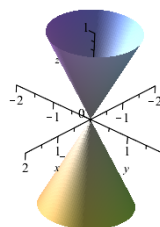   3. $z = 2 - 3x + 2y$

   4. $z = x\cos(y)$

(a) _____

(b) _____

(c) _____

(d) _____

2. Calculate the scalar line integral of the function $f(x, y, z) = x + y$ over the curve $\vec{c}(t) = \langle t, \cos(t), \sin(t) \rangle$ from $t = 0$ to $t = 2\pi$.