

**Mth 322: Homework #2, due 04/16, in class**

Each problem is worth 5 points. Present complete answers that show all work. Only selected problems will be graded.

For each of the following partial differential equations find the general integral and compute three different solutions  $z(x, y)$ :

1)  $z_x - z_y = 1$

2)  $2z_x + z_y = z + 1$

3)  $xz_x + 2yz_y + z = 0$

4)  $zz_x + yz_y = x$

5)  $z_x + z_y = x + y$

6)  $x^2z_x + y^2z_y = z^2$