MAT 661 (Applied Mathematics), Prof. Swift
Homework # 7

Chapter III Problems from the book:
5.1, 5.4, 5.6
6.1, 6.2, 6.4

Extra problems:

1. Find the (x_s, y_s) position of the shock in the half plane $y > 0$ for the Burgers'
equation IVP
$$z z_x + z_y = 0, \quad z(x,0) = \exp(-x^2/2)$$

2. Find the (x_s, y_s) position of the shock in the half plane $y > 0$ for the Traffic Flow
equation IVP
$$(1 - 2z)z_x + z_y = 0, \quad z(x,0) = \exp(-x^2/2)$$

Upated October 28, 2020.