Section: Tuesday, 12:00pm Name: _____

1. What office hours do you prefer? Choose exactly two.

   A. Monday, 11a-12p
   B. Tuesday, 12:30a-1:30p
   C. Wednesday, 10a-11a
   D. Wednesday, 11a-12p
   E. Wednesday, 12p-1p
   F. Wednesday, 1p-2p
   G. Wednesday, 2p-3p
   H. Thursday, 12:30p-1:30p
   I. Thursday, 3:30p-4:30p
   J. Friday, 11a-12p
   K. Friday, 3p-4p
   L. Friday, 4p-5p

2. Match the slope fields in Figure 1 to the differential equations:

   1. $y' = y(1-y)$
   2. $y' = y + x$
   3. $y' = y - x$
   4. $y' = y - 1$

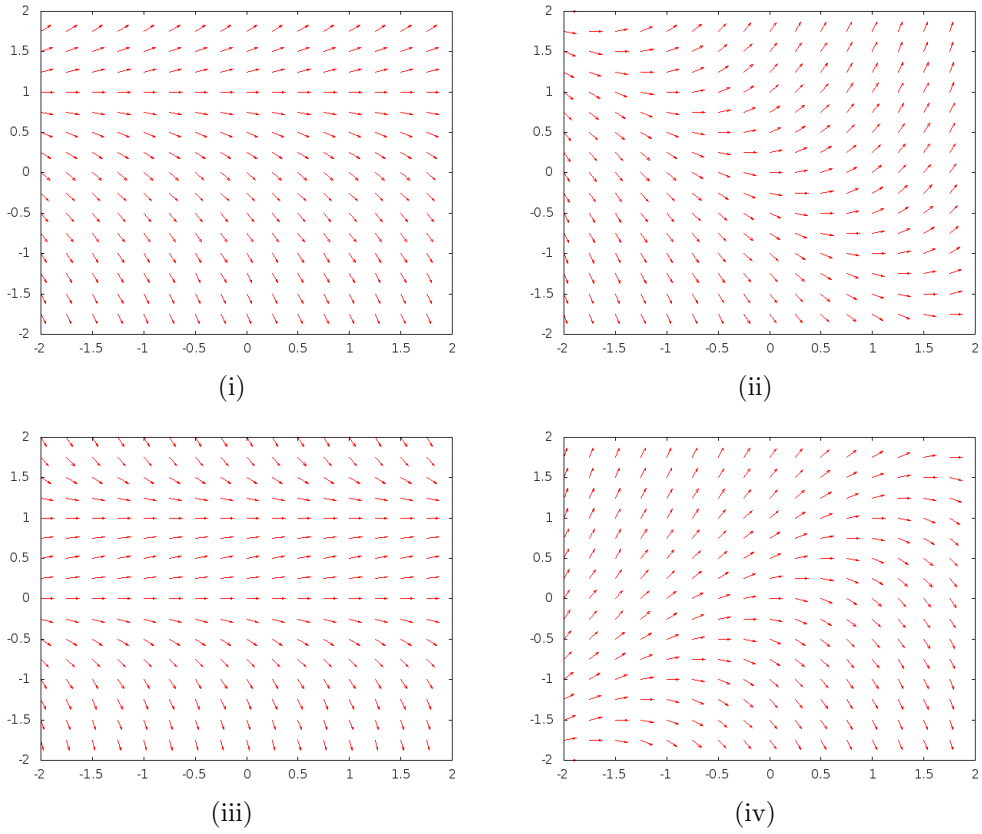

Figure 1: Match these slope fields to the differential equations.

3. Find the general solutions to the differential equations below by separation of variables, or state that you cannot solve them by this method. (Hint: only one of the equations below is inseparable.)

   1. $y' + y^2 \sin x = 0$
   2. $y' + yx = x$
   3. $y' = x^2 + xy$
   4. $xy' = (1-y^2)^{1/2}$