Q3

$\hat{\beta}_0 = 50$

$\hat{\beta}_1 = 20$ $X_1 = GPA$

$\hat{\beta}_2 = 0.07$ $X_2 = IQ$

$\hat{\beta}_3 = 35$ $X_3 = Gender = \{0 = male, 1 = Female\}$

$\hat{\beta}_4 = 0.01$ $X_4 = $ Interaction between GPA & IQ $X_1 X_2$

$\hat{\beta}_5 = -10$ $X_5 = $ Interaction between GPA & Gender $X_1 X_3$

Y = Starting salary after graduation ($1000)

Y = 50 + 20xGPA + 0.07xIQ + 35xGender + 0.01(GPA x IQ) - 10(GPAxGender)

3a
 i. Males earn more? **False**
ii. Females earn more? **True**

iii. Males earn more if GPA sufficiently large?
iv. Females earn more if GPA sufficiently large?

3b

Y = 50 + 20x4 + 0.07x110 + 35x1 + 0.01(4x110) - 10(4x1)
   = 137.1

3c. Since β4, is so small (GPA/IQ) there's very little evidence of an interaction effect? T/F?

β_4