Question 3, Aaron Markiewitz

3(a):

Linear Probability Model:

arr86	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
pcnv	-.1543802	.018964	-8.14	0.000	-.1915656	-.1171948
avgsen	.0035024	.0058876	0.59	0.552	-.0080423	.0150471
tottime	-.0020613	.0042256	-0.49	0.626	-.010347	.0062244
ptime86	-.0215953	.0027532	-7.84	0.000	-.0269938	-.0161967
inc86	-.0012248	.0001141	-10.73	0.000	-.0014487	-.001001
black	.1617183	.0255279	6.33	0.000	.1116622	.2117743
hispan	.0892586	.0210689	4.24	0.000	.0479459	.1305714
born60	.0028698	.0171596	0.17	0.867	-.0307774	.036517
_cons	.3609831	.0167081	21.61	0.000	.3282214	.3937449

What is the estimated effect on the probability of arrest if pcnv goes from .25 to.75?

Estimated Effect: P(arrest | pcnv==.75) - P(arrest | pcnv==.25) = -0.08

3(b):

Test (Robust) : F(2,2716) = 0.18 ; Prob > F = 0.83

Test (Non-Robust) : F(2,2716) = 0.18 ; Prob > F = 0.84

3(c):

arr86	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pcnv	-.5529248	.0720779	-7.67	0.000	-.6941949	-.4116547
avgsen	.0127395	.0212319	0.60	0.548	-.0288742	.0543532
tottime	-.0076486	.0168844	-0.45	0.651	-.0407415	.0254443
ptime86	-.0812017	.0179631	-4.52	0.000	-.1164088	-.0459946
inc86	-.0046346	.0004777	-9.70	0.000	-.0055709	-.0036983
black	.4666076	.0719687	6.48	0.000	.3255515	.6076636
hispan	.2911005	.0654028	4.45	0.000	.1629134	.4192876
born60	.0112074	.0556843	0.20	0.840	-.0979319	.1203467
_cons	-.3138331	.0513	-6.12	0.000	-.4143791	-.213287

Estimated Effect: P(arrest | pcnv==.75 and ...) - P(arrest | pcnv==.25 and ...) = 0.20

3(d):

arr86	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pcnv	.3729384	.2567794	1.45	0.146	-.13034	.8762169
avgsen	.0115072	.0214528	0.54	0.592	-.0305395	.053554
tottime	-.0094539	.0170539	-0.55	0.579	-.0428789	.0239712
ptime86	-.0910761	.0181907	-5.01	0.000	-.1267291	-.0554231
inc86	-.0061883	.0009768	-6.34	0.000	-.0081029	-.0042738
black	.4414538	.0723546	6.10	0.000	.2996415	.5832662
hispan	.2577597	.0662242	3.89	0.000	.1279627	.3875567
born60	-.0022162	.0559399	-0.04	0.968	-.1118564	.107424
pcnv2	-1.005779	.2676443	-3.76	0.000	-1.530352	-.4812054
ptime862	9.51e-06	4.23e-06	2.25	0.024	1.22e-06	.0000178
inc862	0	(omitted)				
_cons	-.3259515	.0559018	-5.83	0.000	-.435517	-.216386

Test (pcnv2 ptime862 inc862) : F(2) = 20.30 ; Prob > F = 0.00

Test (pcnv2 ptime862) : F(2) = 20.30 ; Prob > F = 0.00

Test (pcnv2 inc862) : F(1) = 14.12 ; Prob > F = 0.00

Test (ptime862 inc862) : F(1) = 5.06 ; Prob > F = 0.02