

Answers to DDD Final Fall 2013.

Part I:

1. T 2. F 3. T 4. T 5. T

Part II:

1. $k=0.67$ or $k=0.03$
2. $k=6$
3. 0.464
4. 0.9783
5. $N=40$
6. $N=495$
7. $Z=2$
8. $E(X)=6$, $E(Y)=25$
9. 0.7813

Part III

1. 0.001
2. a) 270725
b) 118807
c) 188474
d) 92820
e) 0.0106
3. $P(F_3 | M) = 0.353$
4. a) 0.2033
b) 0.0062
5. a) 0.1902
b) 0.01
c) 0.9641
6. $t^* = 3.092$, $t_{0.05,8} = 1.86$ Reject null hypothesis
7. $Z^* = -3.05$, $p\text{-value}=0.0022 < 0.05$, Reject null hypothesis
8. a) $p\text{ value} > \alpha$, Do not reject null hypothesis
b) (41.26, 74.74)
9. a) $F^* = 1.159$, $F_{0.05,8,9} = 3.23$ Do not reject null hypothesis
b) $t^* = -0.632$ Do not reject null hypothesis
10. $\chi^{2*} = 11.704$, $\chi^2_{0.005,1} = 7.882$ Reject null hypothesis

Part IV

- a) $k=1/8$ b) 0.1875 c) .0416 $x=1$