Jonesel:S1 ENGR123_A5

1a 0.83
b 1
c. 0.72
d 0.41
e 3

2a. $0.7^3 * 0.3 = 0.1029$
b. $4 \times 0.3 = \underline{1.2}$

3. a. Binomial
b. Poisson
c. binomial.

4a. $P = 0.406$
b. $P = 0.67667$
c. $P = \frac{7}{22} = 0.05265$

5. a. geometric ~~distribution~~ ~~$b = \frac{1}{3} = \frac{2}{6}$~~
~~B.~~ $C = 3$

d. $P(Y=10) = (1 - \frac{2}{6})^{9} \frac{2}{6}$ ~~= 0.00867~~ ~~d. 0.00578~~ $\underline{d = 0.00867}$
c. ~~max = 3~~ $P(X=4) = \frac{8}{81}$

6 mean = 75. fridges. $75 \times 250 = \$6250$
~~Variance~~ ~~=~~ ~~\$6250~~ Var = \$250

~~P (k events in t interval) $= \frac{(\lambda t)^k e^{-\lambda t}}{k!}$~~
~~k = Num of occurances~~
~~λt =~~
~~$\frac{25^{30} e^{-25}}{30!}$~~

~~1.225 304~~

~~b(n(30, 0.26))~~