

7) a)  $\frac{{}^{10}C_6}{2^{10}} = \boxed{0.2051}$

b)  ${}^{10}C_6 \cdot (.7)^6 \cdot (.3)^4 = \boxed{0.2001}$

11)  ${}^{12}C_6 (.5)^6 (.5)^6 + {}^{12}C_7 (.5)^7 (.5)^5 + {}^{12}C_8 (.5)^8 (.5)^4 +$   
 ${}^{12}C_9 (.5)^9 (.5)^3 + {}^{12}C_{10} (.5)^{10} (.5)^2 + {}^{12}C_{11} (.5)^{11} (.5)^1 +$   
 ${}^{12}C_{12} (.5)^{12} (.5)^0 = \boxed{0.6128}$

13) a)  ${}^4C_1 (.25)^1 (.75)^3 = \boxed{0.4219}$

b)  ${}^4C_1 (.25)^1 (.75)^3 + {}^4C_2 (.25)^2 (.75)^2 + {}^4C_3 (.25)^3 (.75)^1 +$   
 ${}^4C_4 (.25)^4 (.75)^0 = \boxed{0.6875}$

15) a)  ${}^{12}C_{10} (.2)^{10} (.8)^2 = \boxed{0.2835}$

b)  ${}^{12}C_6 (.2)^6 (.8)^6 + {}^{12}C_1 (.2)^1 (.8)^{11} + {}^{12}C_2 (.2)^2 (.8)^{10} +$   
 ${}^{12}C_3 (.2)^3 (.8)^9 = \boxed{0.7944}$