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MATH 080
27 July 2020
Homework #3

67.
A. We don't know of both probabilities are related and we can't add them together, they should be multiplied. And probability shouldn't be more than %100.
B. This sentence is wrong, because hitting a homerun means that the player had a successful hit. These two events are conditioned together. So, the player has to have the same probability of successful hits as homeruns.

82.
A.S={00,0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36}
B. P(red) = 18/38 = 0.47
C. P(1^{st}12) = 12/38= 0.32
D. P(even) = 18/38 = 0.47
E. No, because the wheel has (00, 0).
F. Even and Odd or Red and Black.
G. No, P(even) = 0.47 and P(1^{st} Dozen) = 0.32

84.
A. P(Red) = P(Black) = 18/38, P(Red or Black) = P(Red) + P(Black) = 36/38
B. P(Dozen Groups) = 12/38
C. P(1 from 18) = 18/38
D. P(range of 19-36) = 18/38
E. P(Column bet) = 12/38
F. P(Even) = P(Odd) = 18/38; P(Even or Odd) = P(E) + P(O) = 36/38

85.
A. (G1, G2, G3, G4, G5, Y1, Y2, Y3)
B. 5/8
C.2/3

D. 2/8
E.6/8
F, No, because P(G and E) doesn't = 0.

86.
A.

1st roll	**1**	**2**	**3**	**4**	**5**	**6**

2nd Roll						
1	(1,1)	(1,2)	(1,3)	(1,4)	(1,5)	(1,6)
2	(2,1)	(2,2)	(2,3)	(2,4)	(2,5)	(2,6)
3	(3,1)	(3,2)	(3,3)	(3,4)	(3,5)	(3,6)
4	(4,1)	(4,2)	(4,3)	(4,4)	(4,5)	(4,6)
5	(5,1)	(5,2)	(5,3)	(5,4)	(5,5)	(5,6)
6	(6,1)	(6,2)	(6,3)	(6,4)	(6,5)	(6,6)

B. P(A) = 6/36
C. P(B) = 21/36
D. P(A|B) represents ruling the two dice to have a total of 7 max. P(A\B) = 7/21
E. No, because A and B can happen at the same time. P (A and B) = 7/36.
F, Yes, they are. B and A can occur independently, knowing that event A can happen doesn't change the probability that even B can happen.
P(A|B) = 7/21
P(A) = 12/36