Question 1:
(15/15)*(14/15)*(13/15)*(12/15)*(11/15)*(10/15)*(9/15)*(8/15)=128128/1265625
The probability is 128128/1265625.

Question 2:
First digit has 5 options (all odd numbers)
Second digit has 4 options (all odd numbers that aren't the first digit)
Fifth digit has 5 options (all even numbers)
Third digit has 7 options
Fourth digit has 6 options

5*4*5*7*6=4200 numbers satisfy criteria
4200/10000=21/50

The probability is 21/50.

Question 3:
P(A|B)=3/6=1/2

P(A):
LLL No
LLH No
LHL No
LHH Yes
HLL No
HLH Yes
HHL Yes
HHH Yes
P(A)=4/8=1/2

They are independent.

Question 1 again for some reason:
(52/52)*(12/52)*(11/52)*(10/52)*(9/52)=1485/913952
Expected value is = 913952/1485
The expected number is 913952/1485.

Question 2: Electric Boogaloo:

Let A = probability of superstar playing
Let B = probability of winning exactly 4/5 games

P(A|B)=P(B|A)*P(A)/P(B)
P(A|B)=P(B|A)*P(A)/(P(B|A)*P(A)+P(B|!A)*P(!A))
P(A|B)=P(B|A)*P(A)/(P(B|A)*3/4+P(B|!A)*1/4)
P(A|B)=P(B|A)*P(A)/(P(B|A)*3/4+P(B|!A)/4)
P(A|B)=4*P(B|A)*P(A)/(P(B|A)*3+P(B|!A))
P(A|B)=4*P(B|A)*3/4/(P(B|A)*3+P(B|!A))
P(A|B)=3*P(B|A)/(3*P(B|A)+P(B|!A))
P(B|A)=(5 choose 4)*(7/10)**4*(3/10)=7203/20000
P(A|B)=3*(7203/20000)/(3*(7203/20000)+P(B|!A))
P(A|B)=21609/20000/(3*(7203/20000)+P(B|!A))
P(A|B)=21609/(20000*(3*(7203/20000)+P(B|!A)))
P(A|B)=21609/(20000*(21609/20000+P(B|!A)))
P(A|B)=21609/(20000*21609/20000+20000*P(B|!A))

P(A|B)=21609/(21609+20000*P(B|!A))
P(B|!A)=P(B|A)=(5 choose 4)*(1/2)**4*(1/2)=5/32
P(A|B)=21609/(21609+20000*5/32)
P(A|B)=21609/(21609+3125)
P(A|B)=21609/24734

The probability is 21609/24734.