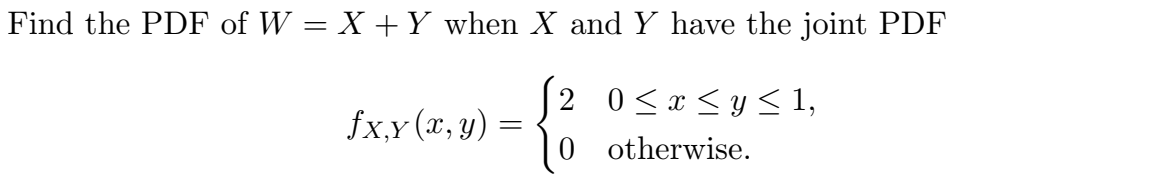
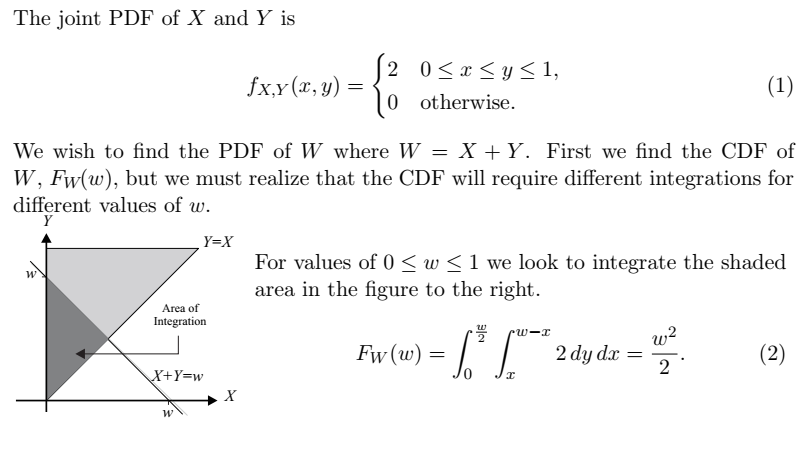
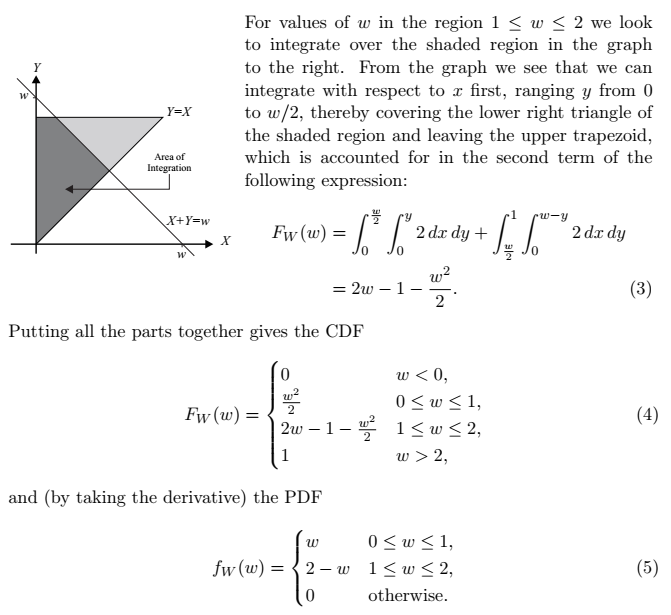
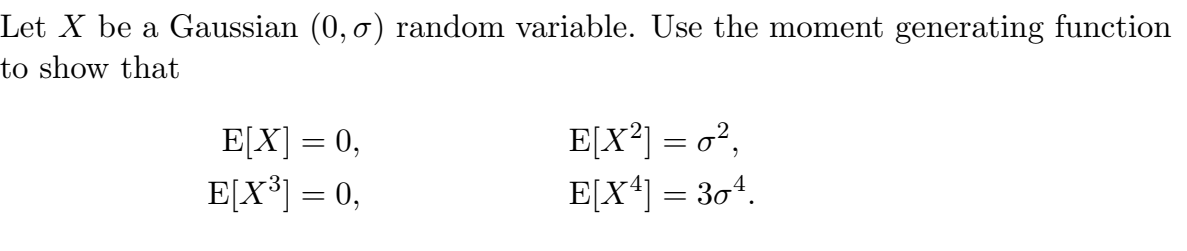
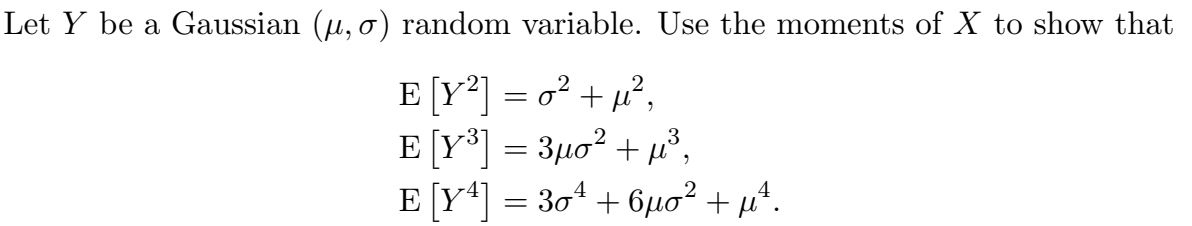
1. 

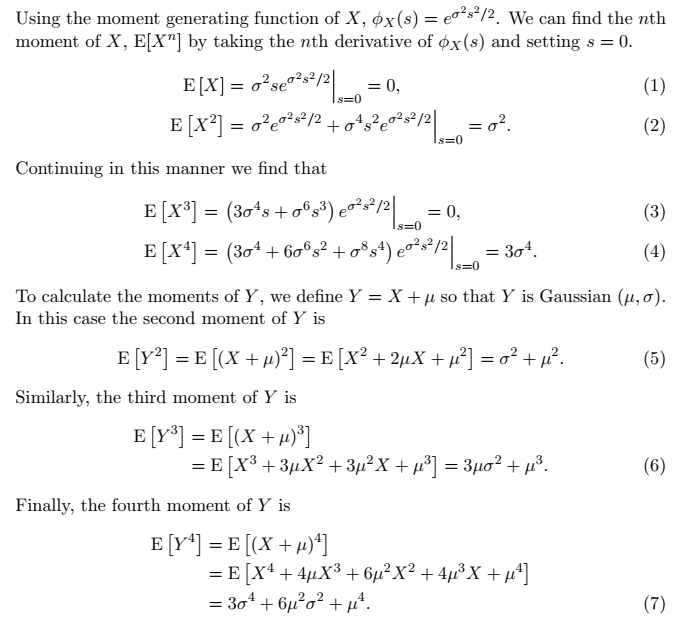




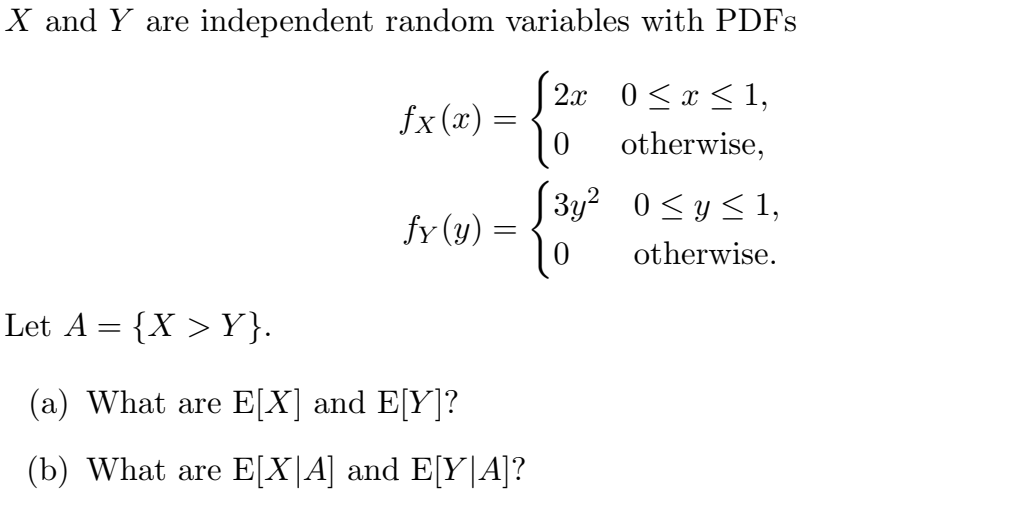
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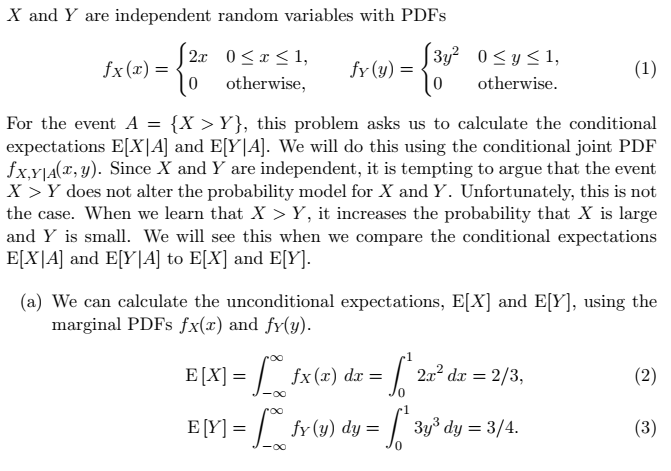


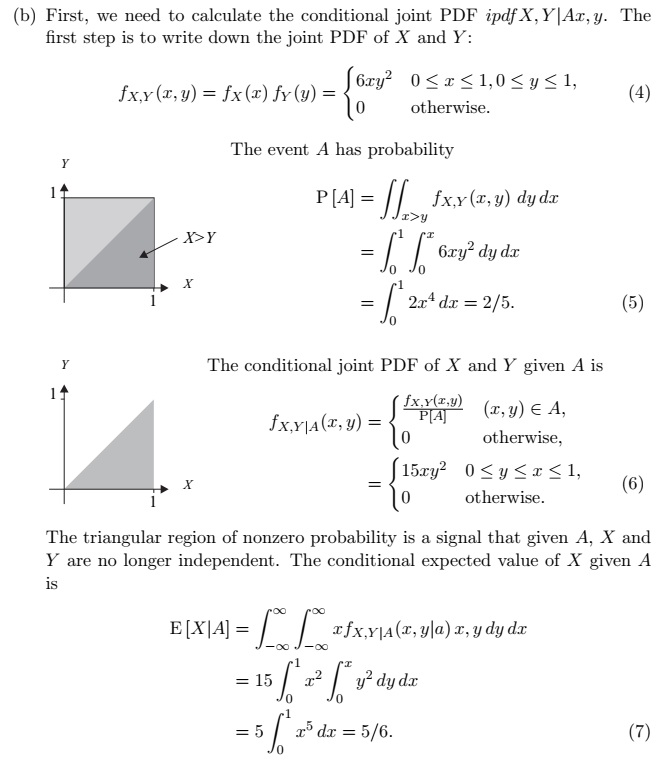




3.

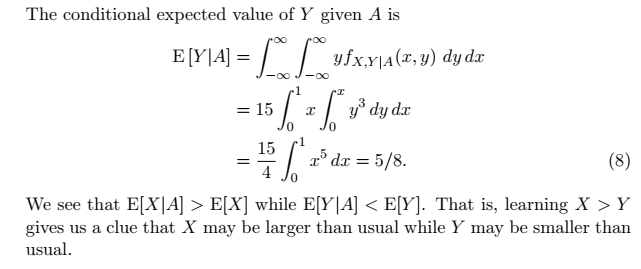




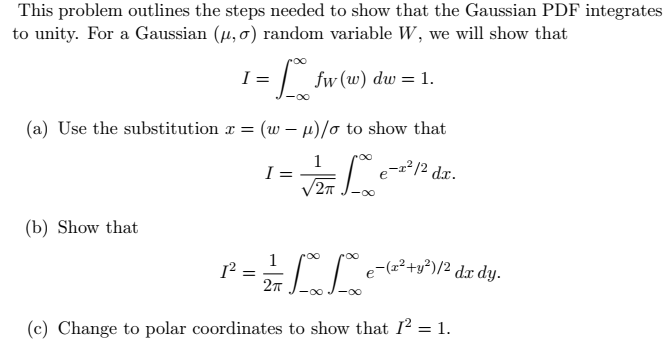


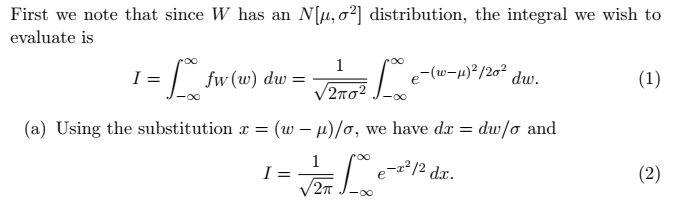
Instructor’s note: The first equality in (7) is a few typos. It should be the double integral of x times

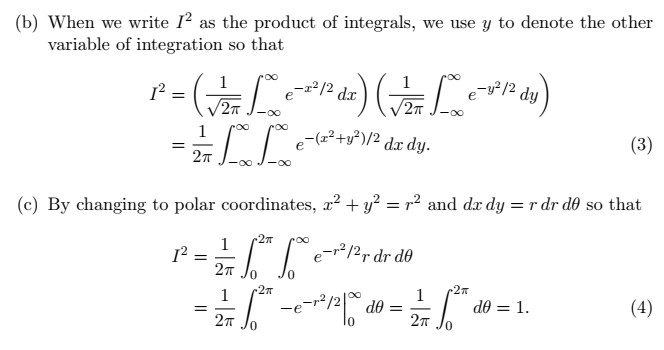
Double integral of f\_X,Y|A(x,y) dy x dx



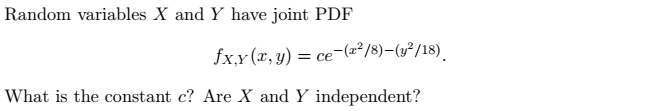
4.

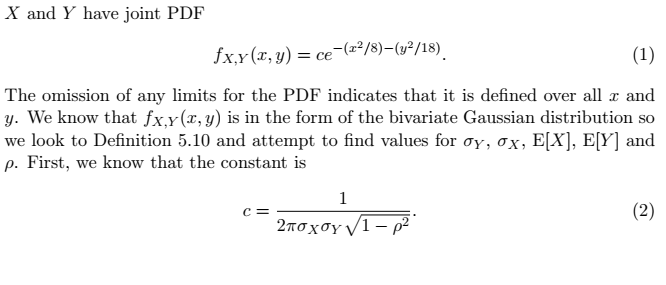






5.

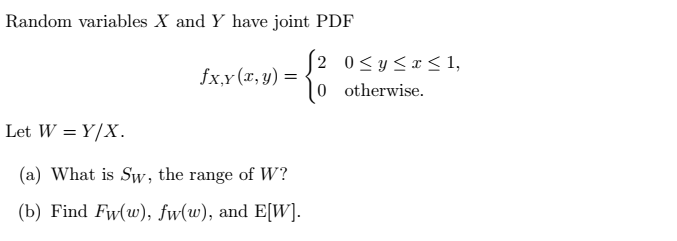


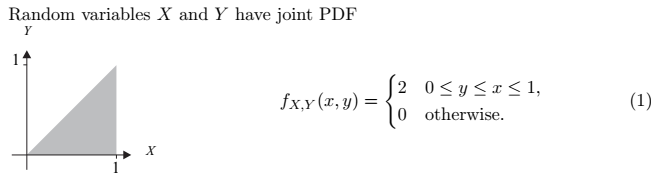


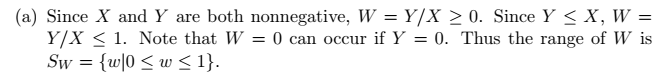
Equating the exponent of (1) with the bivariate Gaussian, we get

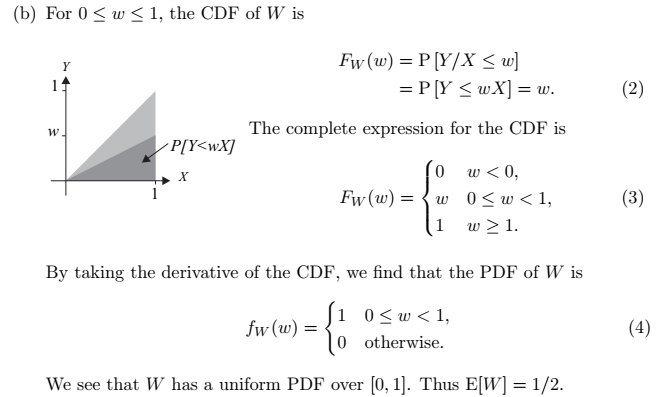
rho = 0, sigma\_X = 2, sigma\_Y = 3, and c=1/(12 pi).

6.





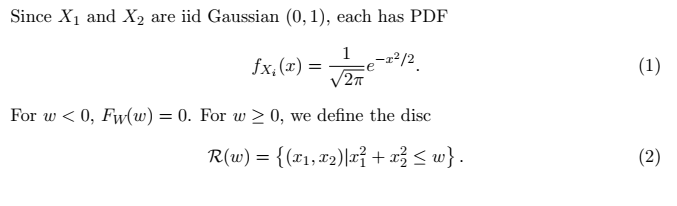


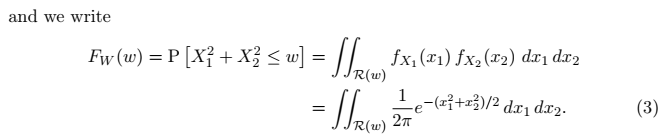


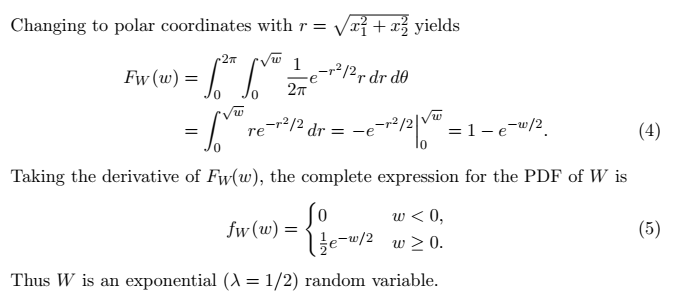
0

7.

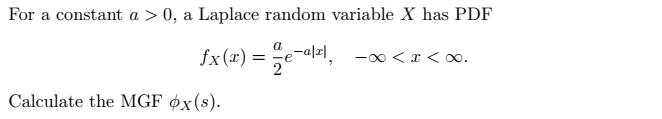


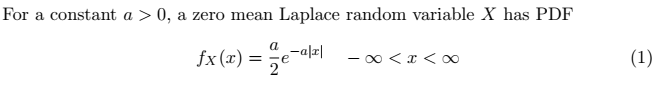


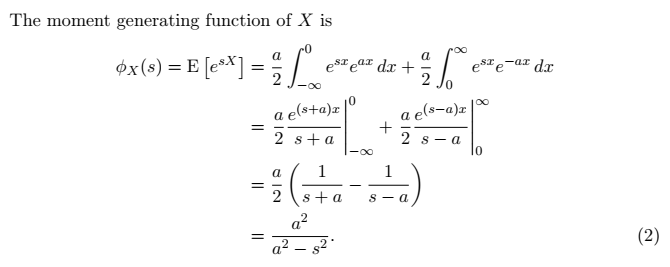




8.

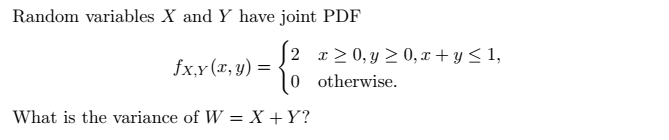








9.



We can use the variance identity

