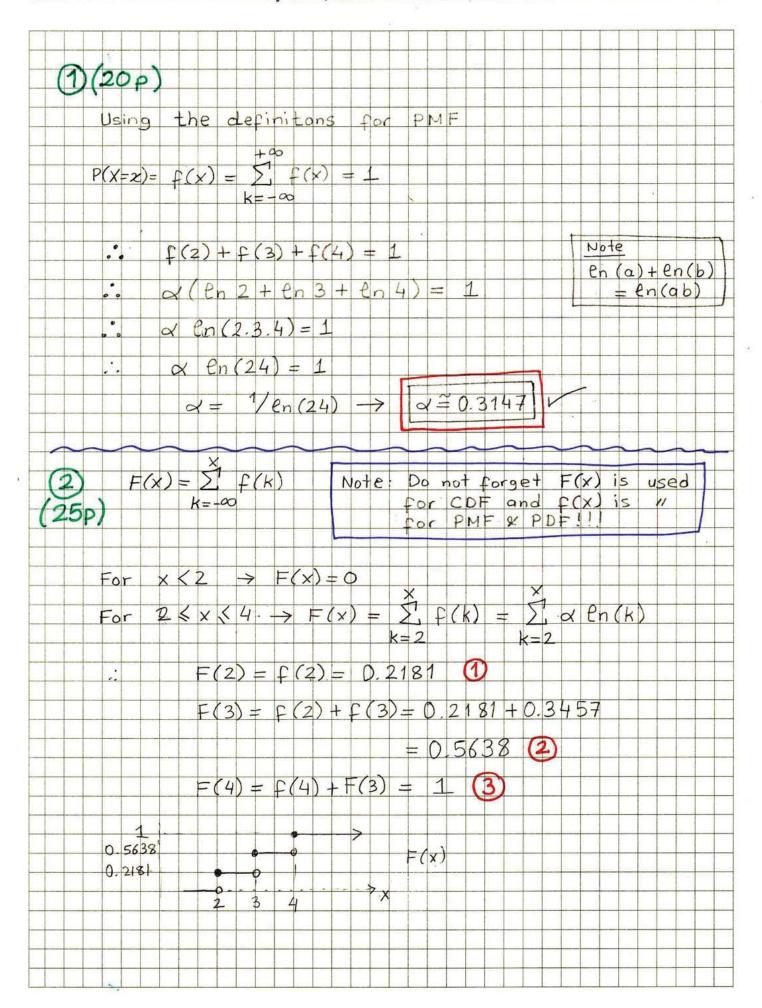
## RSP - Örgün -2014 Midterm (Mazeret) Solutions - 15/05/2014 -



(3)(30p) $E(x) = \mu_X = \sum_{x=0}^{4} x \cdot \alpha \cdot \ln(x)$  $= 2 \cdot f(2) + 3 \cdot f(3) + 4 \cdot f(4)$  $= 2 \times 0.2181 + 3 \times 0.3457 + 4 \times 0.4362$ = 3.2181 /  $V(X) = E(X^2) - M_X^2$  $E(x^2) = \sum_{x=3}^{4} x^2 \cdot f(x)$  $= 4 \cdot f(2) + 9 \cdot f(3) + 16 \cdot f(4)$  $= 4 \times 0.2181 + 9 \times 0.3457 + 16 \times 0.4362$  $E(X^2) - 10.9629$ using 1 2  $V(x) = E(x^2) - Mx^2 = 10.9629 - (3.2181)^2$ V(x) = 0.6067 114) (25 p)  $E[h(x)] = E(x^2 + 2x - 1) = E(x^2) - 2E(x) - 1$ using 1 2  $= 10.9629 + 2 \times 3.2181 + 1$ E[h(x)] = 5.5267 14