

PTC2311 Introdução a Processos Estocásticos
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Lista 2

Exercícios dos Capítulos 2/3 do livro texto (Edição 3)

- 1) 2.1 Resp, (a) {0,2,5,12} (b) {-1,4,30.25,179} (c) {1,-1,0} (d) {1,-.5,-1/6.5, -1/17}
- 2) 2.9 Resp: Feito em classe
- 3) 2.10 Resp: $P(X=0)=.0640$, $P(X=2)=0.288$, $P(X=3)=0.4320$, $P(X=4)=0.2160$
- 4) 2.13 Resp: (a) $f_X(0)=f_X(2)=f_X(5)=f_X(12)=1/4$; (b) $f_X(-1)=f_X(4)=f_X(30.25)=f_X(179)=1/4$;
(c) $f_X(0)=f_X(-1)=1/4$, $f_X(1)=1/2$
- 5) 2.18 Resp: (a) Probabilidades associadas respectivamente aos consumos {0,0.5, 1,...,3.}=[0.0467,0.1866,0.311,0.2765,0.1382,0.0389,0.0041] e (b) Probabilidade de sobrecarga: 0.041
- 6) 2.19 (a) Probabilidade de sobrecarga 0.0153 (b) Probabilidade de sobrecarga com 2 geradores 0.08
- 7) 2.24 (a) 0.0454 (b) 0.0228
- 8) 2.25 (a) 0.3173 (b) 0.1587
- 9) 2.54 (a) 0.1847 (b) 2.5889 (c) 2.99941
- 10) 2-69 (a) 0.0668 (b) 0.9332
- 11) 2.76 (a) 0.2793 (b) 0.6634 (c) 0.3366
- 12) 3.1 (a) 6.85
- 13) 3.2 Resp: 4
- 14) 3.9 Demonstrar.
- 15) 3.16 Demonstrar.
- 16) 3-26. 45
- 17) 3-31 $\frac{a}{\pi} \frac{1}{a^2 + x^2}$
- 18) 3-37 $\frac{1}{\theta_1 - \theta_2} \frac{1}{\sqrt{1 - x^2}}$
- 19) 3-46 Resp: -6.7009e-004