



**INSTITUTO
FEDERAL**

Santa Catarina

Câmpus
São José

Relatorio 01

Processos Estocásticos (PRE029006)

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Sumário

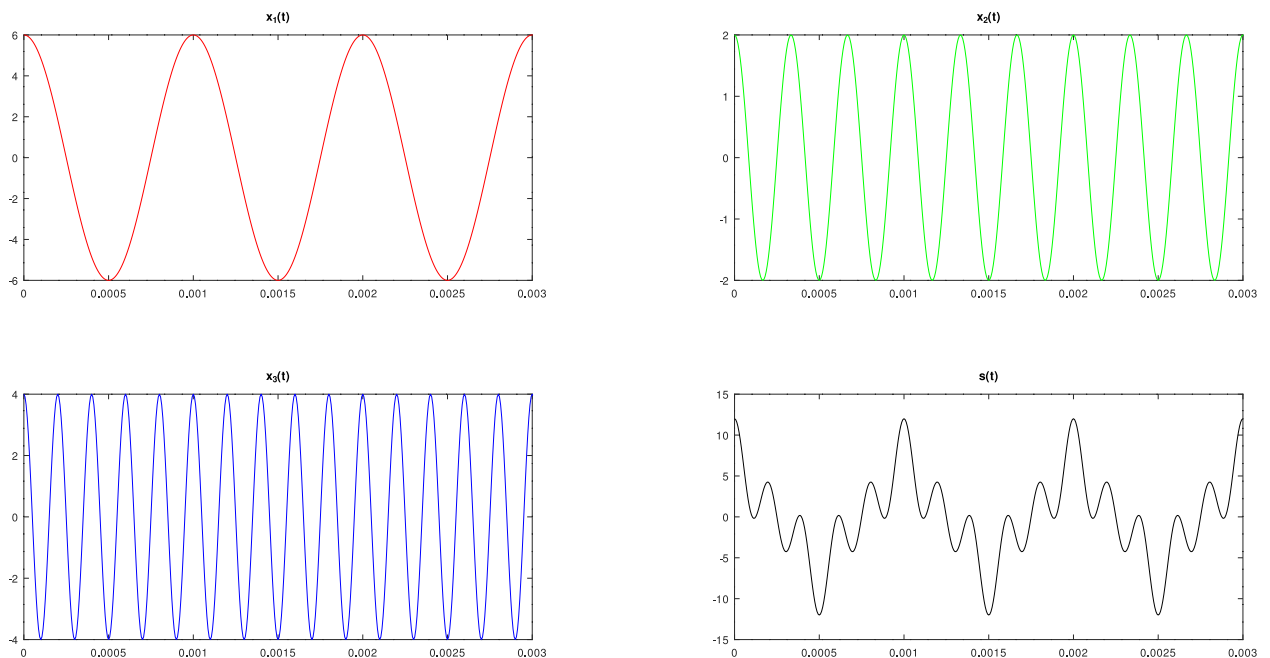
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1. Exercício 01

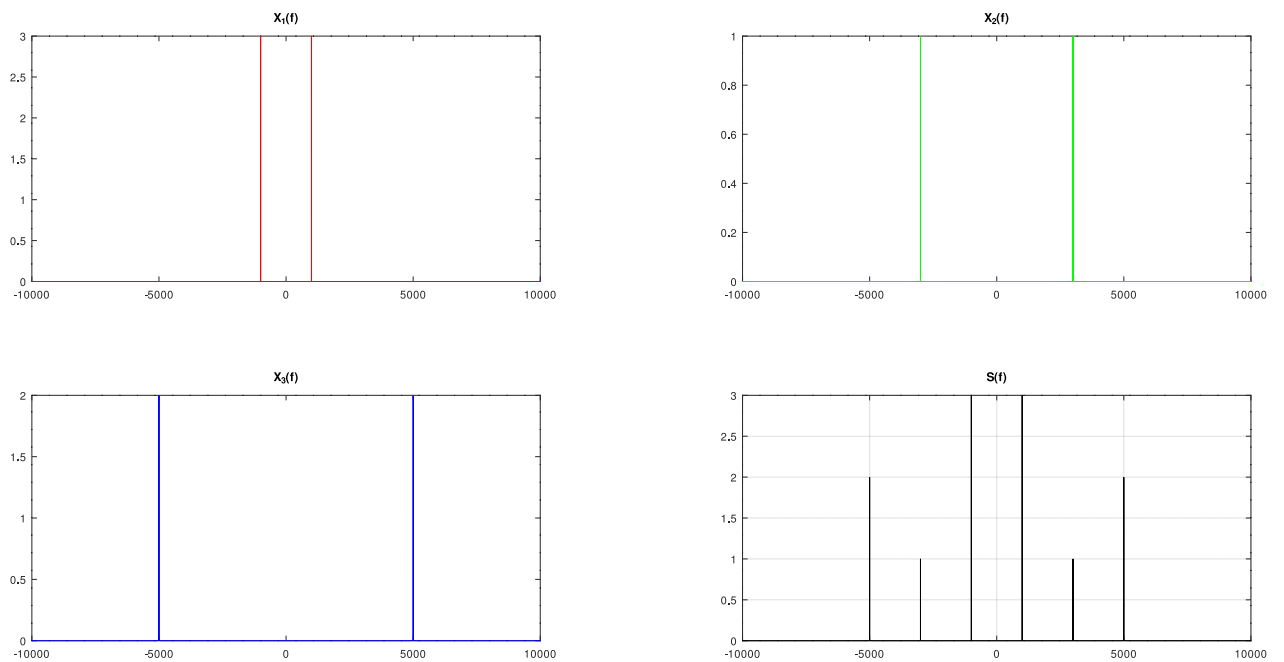
Comando da questão:

1. Gerar um sinal $s(t)$ composto pela somatória de 3 senos com amplitudes de 6V, 2V e 4V e frequências de 1, 3 e 5 kHz, respectivamente.
2. Plotar em uma figura os três cossenos e o sinal 's' no domínio do tempo e da frequência.
3. Utilizando a função 'norm', determine a potência média do sinal 's'.
4. Utilizando a função 'pwelch', plote a Densidade Espectral de Potência do sinal 's'.

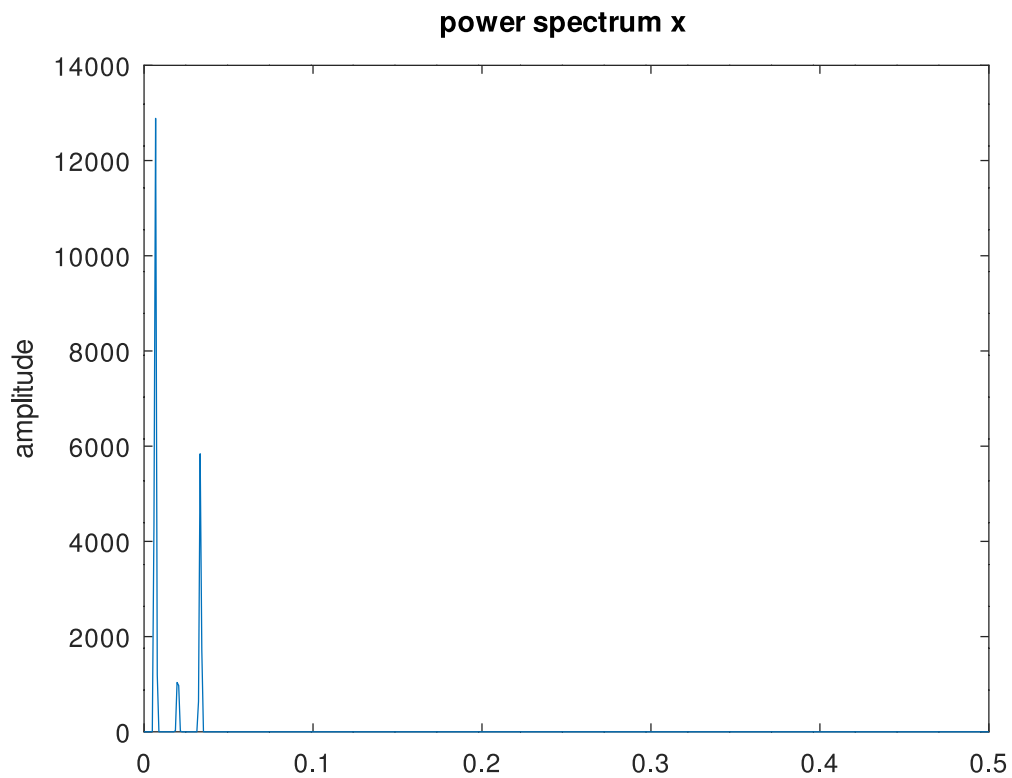
1.1. Resultados



A Figura 1 mostra 4 gráficos. Esses sendo os 3 sinal no dominio do tempo com amplitudes de 6V, 2V e 4V e frequências de 1, 3 e 5 kHz, respectivamente e por fim a soma dos 3 cossenos

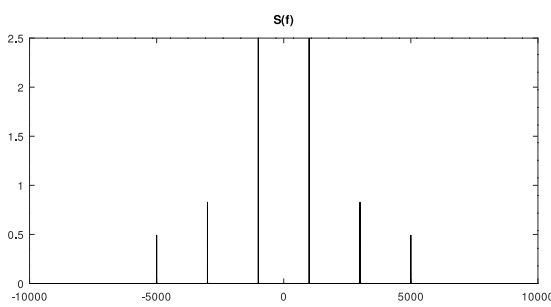
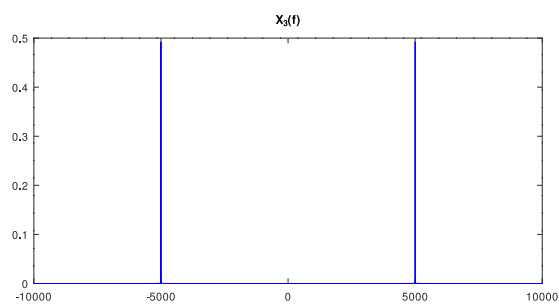
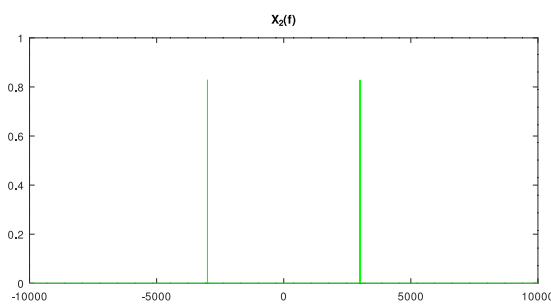
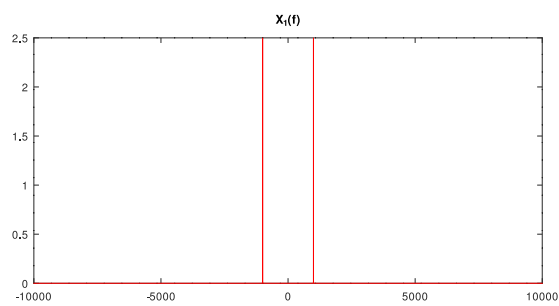
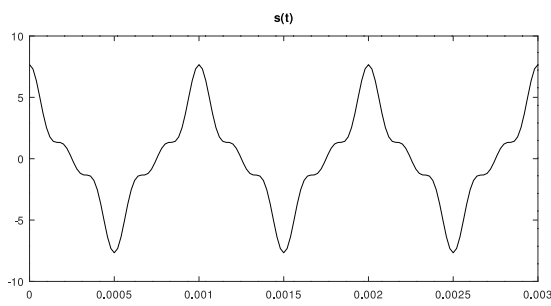
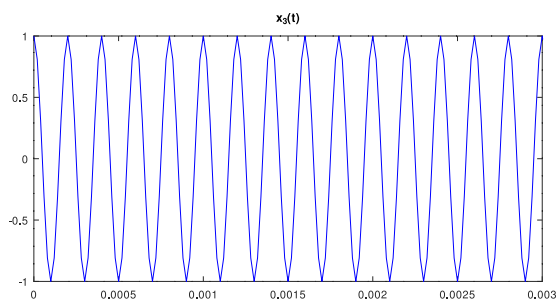
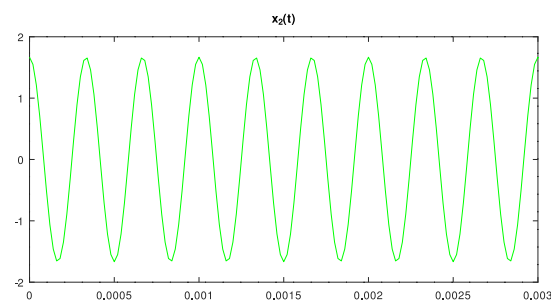
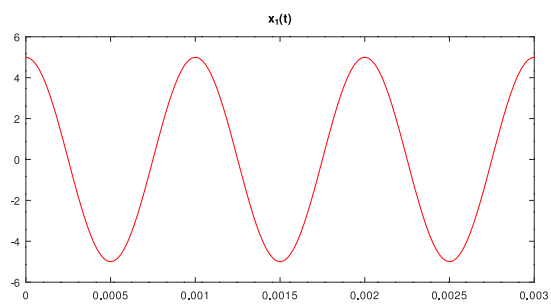


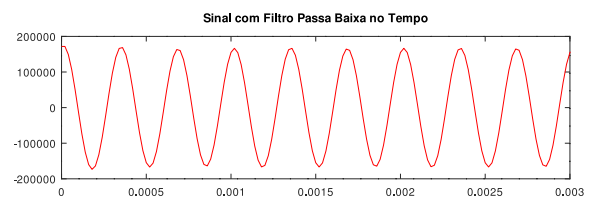
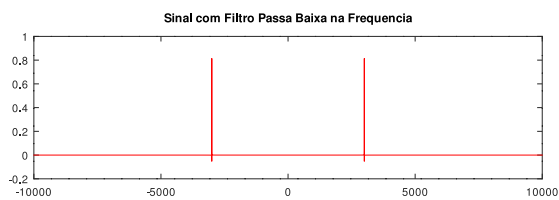
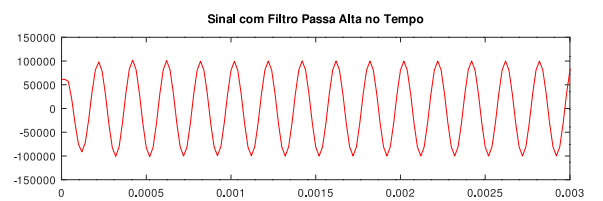
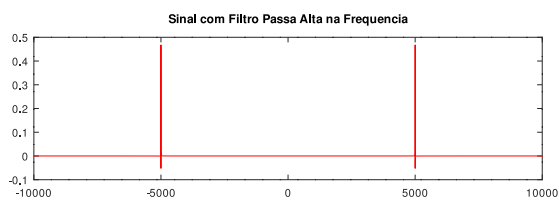
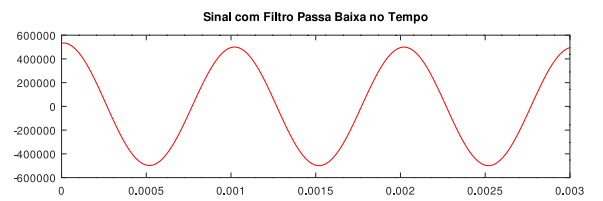
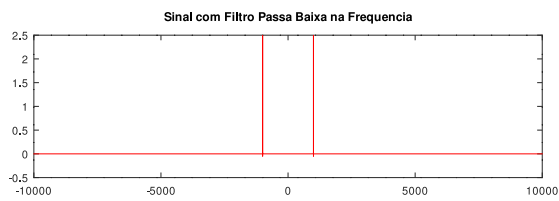
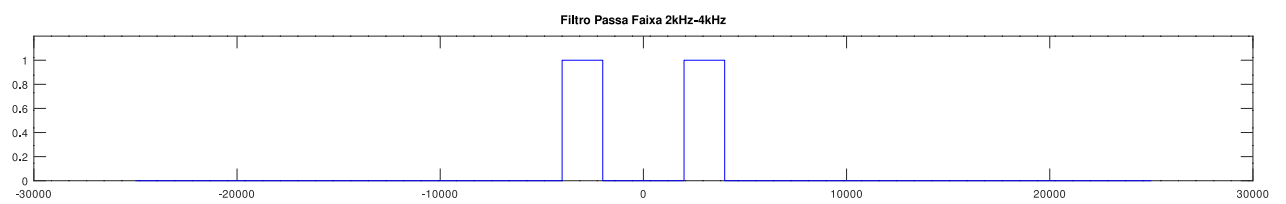
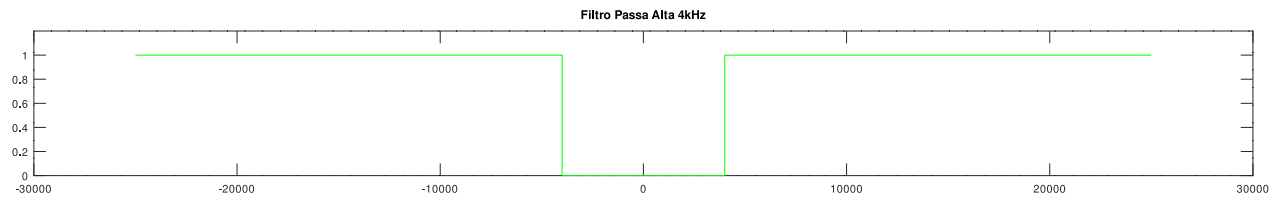
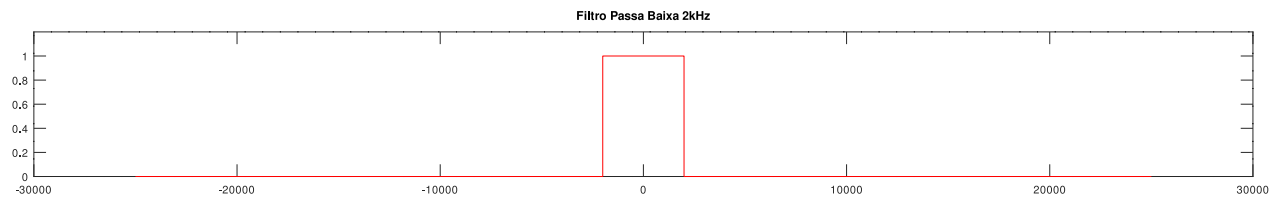
A Figura 2 mostra 4 gráficos. Esses sendo os 3 sinal no dominio da frequência com amplitudes de 6V, 2V e 4V e frequências de 1, 3 e 5 kHz, respectivamente e por fim a soma dos 3 cossenos



A Figura 3 mostra o sinal $S(f)$ de forma mais proxima ao real, pois não é um impulso preciso na frequência.

2. Exercício 02





3. Exercício 03