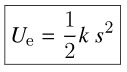
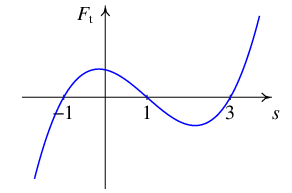
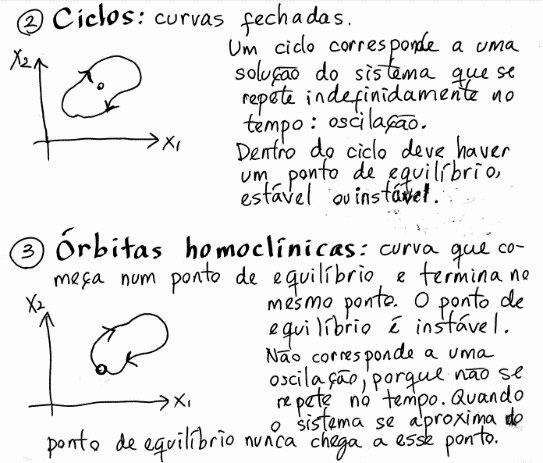
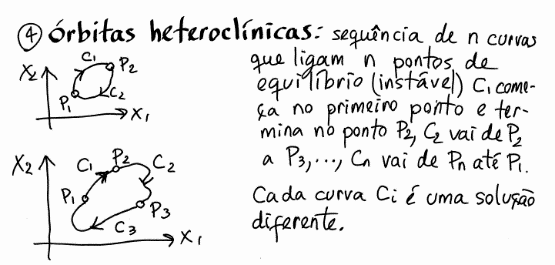
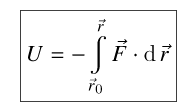
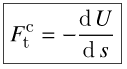
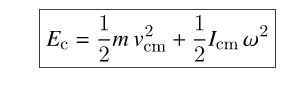
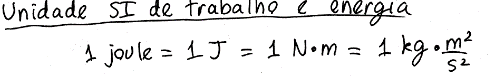
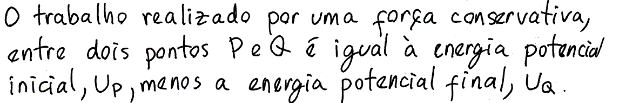
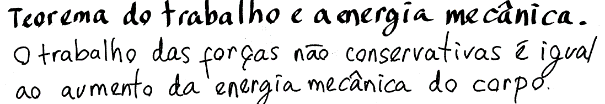
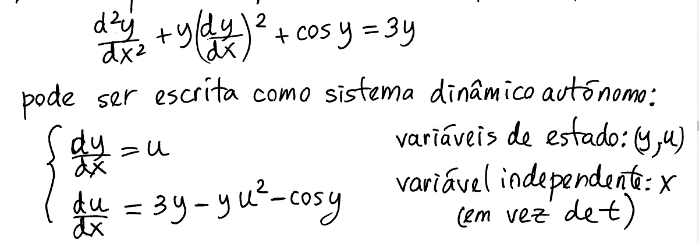
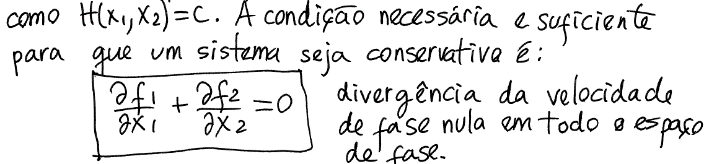
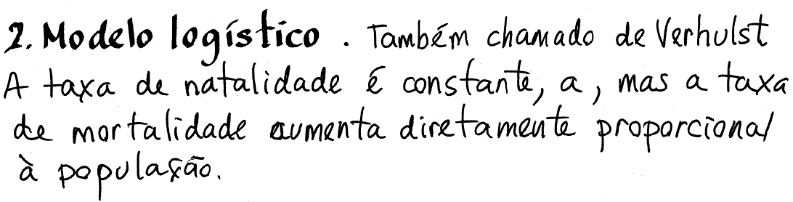
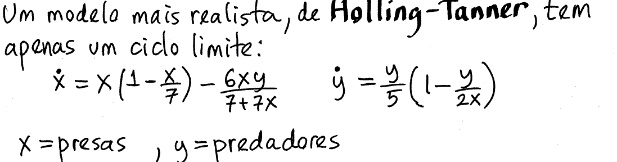
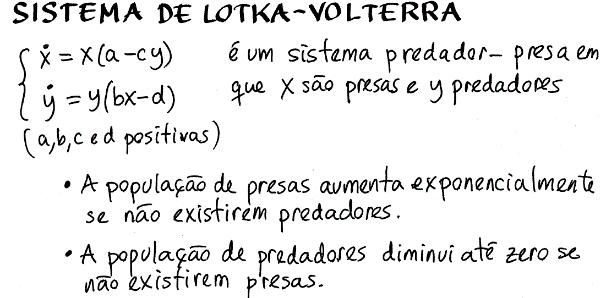
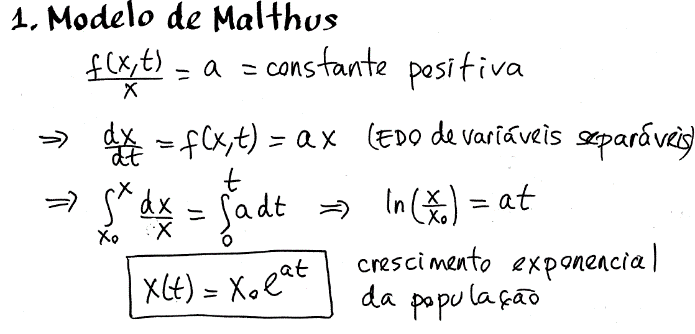
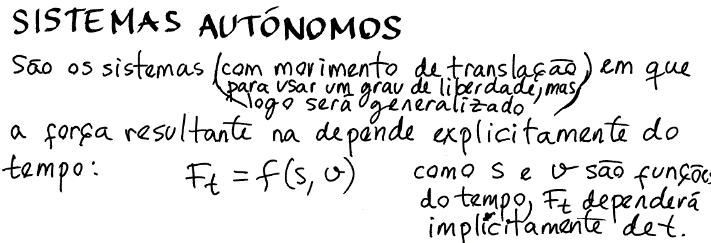
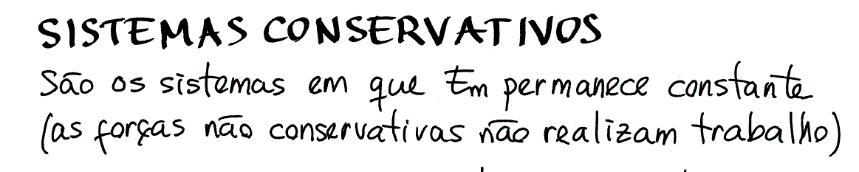
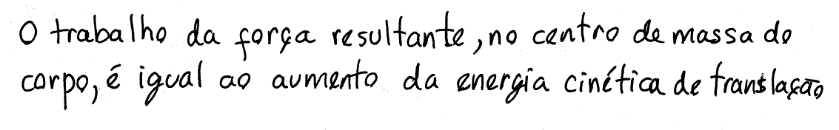


No gráfico da Energia Potencial (U) os máximos da função são pontos de equilíbrio instáveis e os mínimos são pontos de equilíbrio estável.

Energia Potencial Elástica:

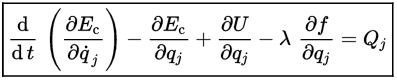
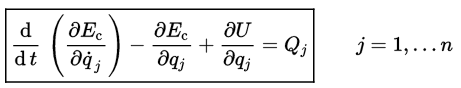
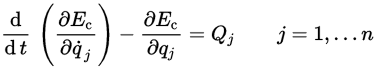
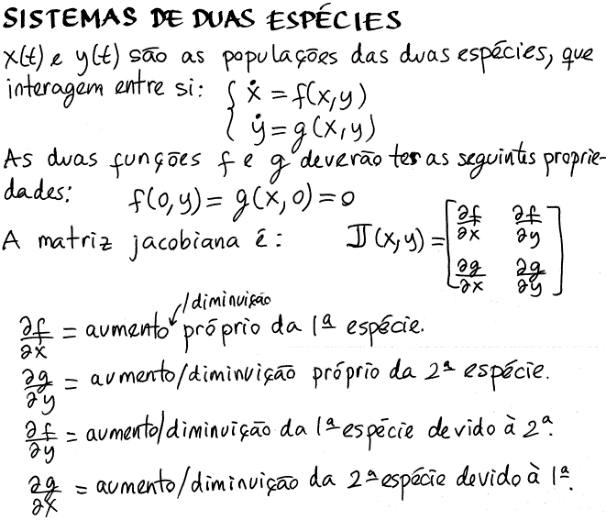
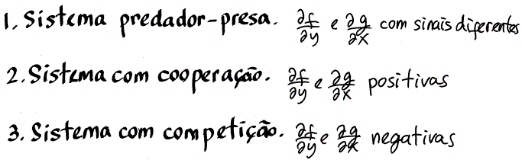
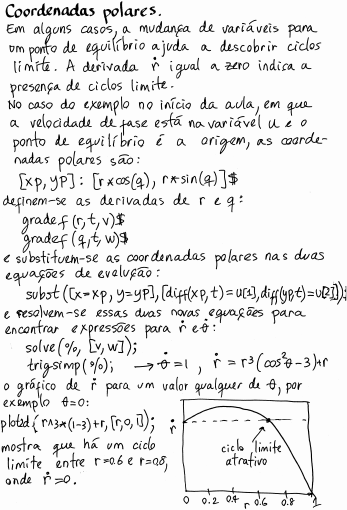
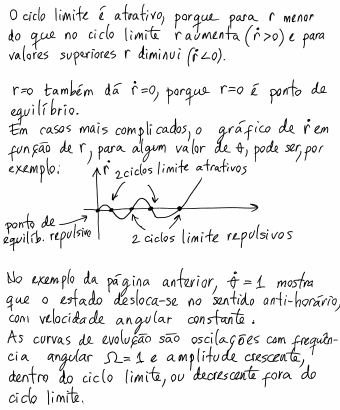
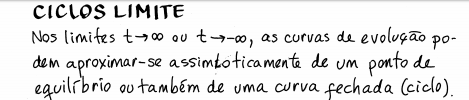
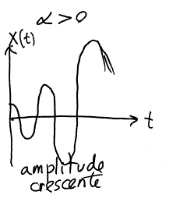
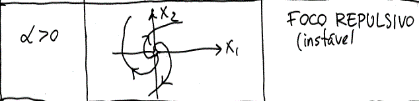
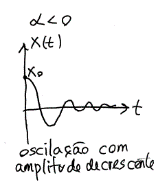
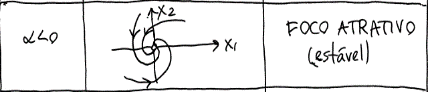
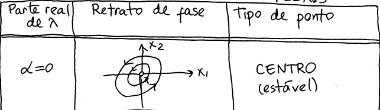
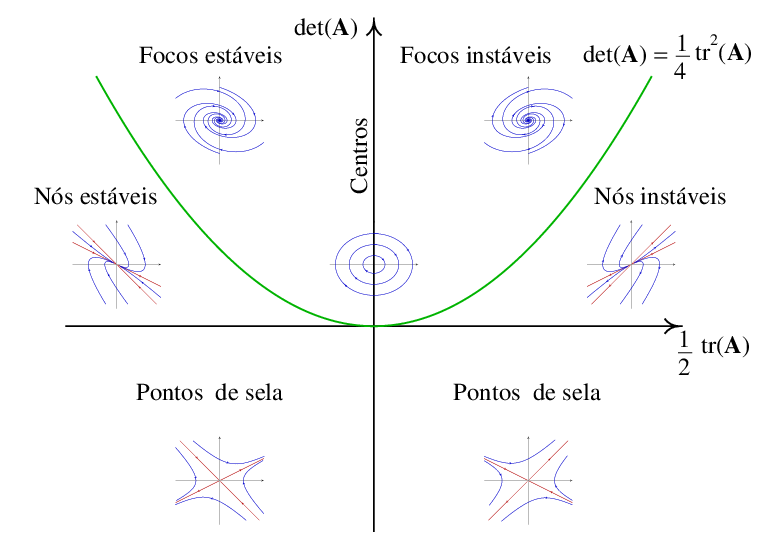
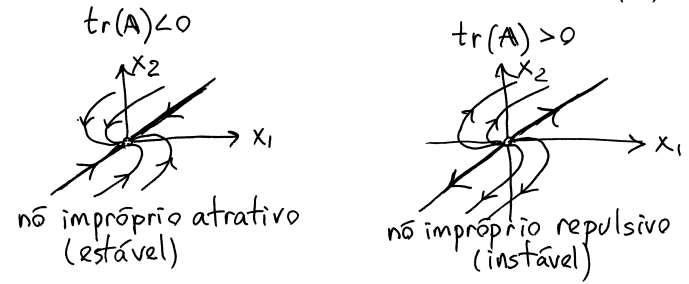
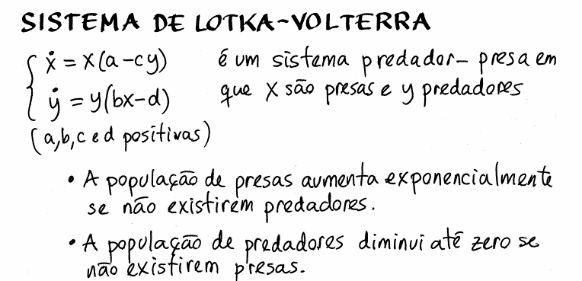
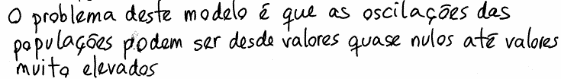
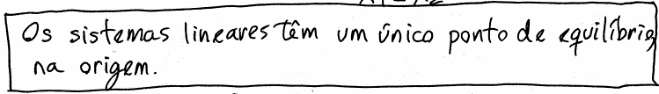
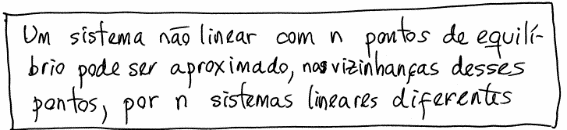
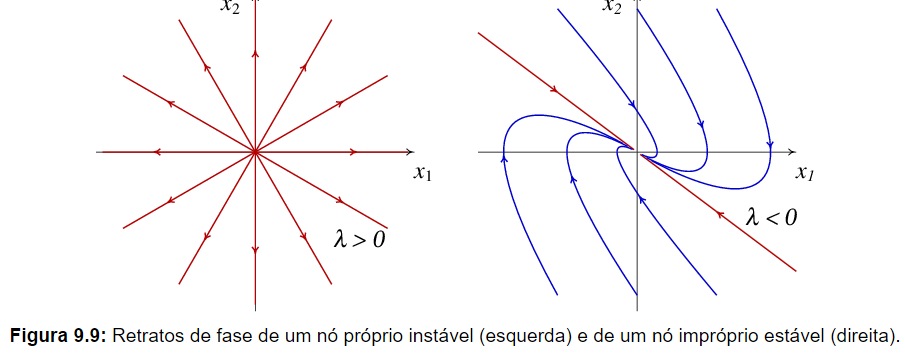
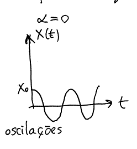




Equação diferencial

Nos gáficos da Força tangencial os pontos de equilíbrio são as raízes da função (zeros da função). Se o zero vier do negativo para o positivo o equilíbrio é instável, se vier do positivo para o negativo o equilíbrio é estável.

Forças conservativas:

http://i.imgur.com/BJ58IEu.png

Frequência angular (Ω) = parte imaginária de ƛ

Usar quando Qj representa a força generalizada que resulta da contribuição de todas (conservativas e não conservativas)

Usar quando Qj representa a força generalizada que resulta da contribuição apenas das forças não conservativas

Usar quando é preciso calcular forças de ligação

Sistema conservativo -> traço da matriz = 0

Sistema linear -> matriz jacobiana constante

Sistema não linear -> nenhum dos anteriores

**Comandos fixes**

eigenvectors(matriz)

eigenvalues(matriz)

coefmatrix(lista\_equacoes, lista\_variaveis)

plotdf(lista\_equacoes, lista\_variaveis, (opcional) intervalo\_variavel) - usar trajectory at para ver evolucao

jacobian(lista\_equacoes, lista\_variaveis)

rk(lista\_equacoes, lista\_variaveis, lista\_valores\_inicias\_variaveis, [variavel\_independente,valor\_inicial,valor\_final,incremento])

Cenas:

Numa máquina de atwood(dois cilindros ligados por roldana)

aceleração:((massa1-massa2)\*gravidade)/(massa1+massa2+roldana/2)

T1:massa1\*gravidade-massa1\*aceleração

T2:massa2\*gravidade-massa2\*aceleração