MIT MATHLETS

POLES AND VIBRATIONS

A wide range of waveforms occur as the sum of two damped oscillations. The long-term behavior is reflected by the pole diagram of the Laplace transform.
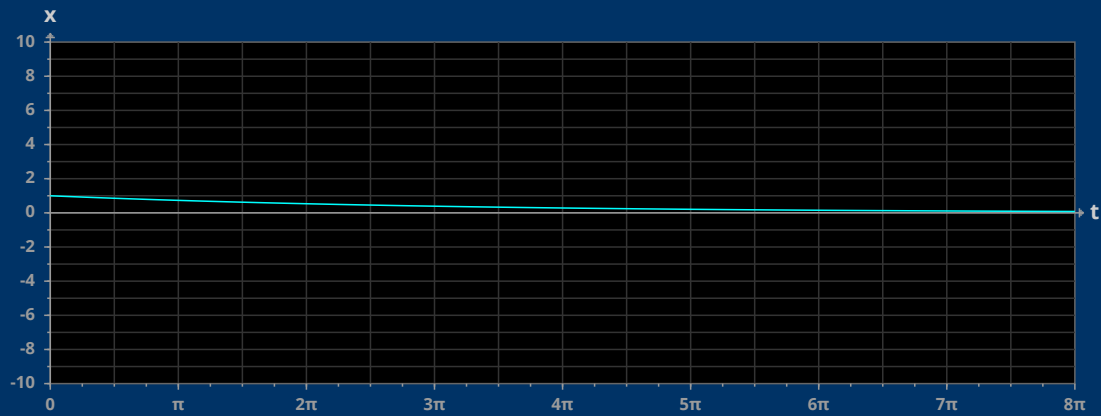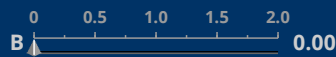
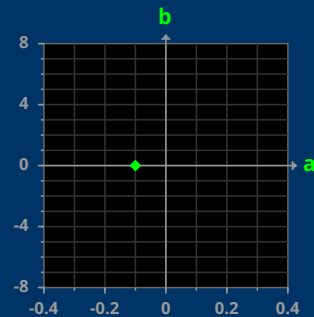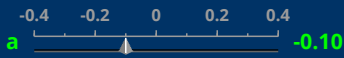Mathlet | Description | Activity | Comments

POLES AND VIBRATIONS

mode   + help

$f(t) = Ae^{at}\cos(bt)$

☐ **Envelope**

0   0.5   1.0   1.5   2.0
A ———————— **1.00**

0   0.5   1.0   1.5   2.0
B ———————— **0.00**

z = -0.10 ± 0.00i

-0.4   -0.2   0   0.2   0.4
a ———————— **-0.10**

-8   -4   0   4   8
b ———————— **0.00**