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Python 3.6.4 |Anaconda, Inc.| (default, Jan 16 2018, 10:22:32) [MSC v.1900 64 bit (AMD64)]
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IPython 6.2.1 -- An enhanced Interactive Python.

In [1]: runfile('G:/My Drive/Plebe Year(Drive)/Semester 1/IT/Grant- IT105 Project For Sub.py',
wdir='G:/My Drive/Plebe Year(Drive)/Semester 1/IT')
This calculator will provide you with prompt you to enter the a,b,c,and d values of a two by two
matrix which was extracted from a system of differential equations. The calculator will provide a
general solution to the system of diff eqs. It will also provide the eiganvalues and eiganvectors
given that you are runnnig the proper software.
From your system of differental equations. Extract the 2x2 matrix.

input a value of a 2x2 matrix:1

input b value of a 2x2 matrix:3

input c value of a 2x2 matrix:12

input d value of a 2x2 matrix:1
The eiganvalues are:
{7: 1, -5: 1}
The eiganvectors are:
[(-5.00000000000000, 1, [Matrix([
[-0.5],
[ 1.0]])]), (7.00000000000000, 1, [Matrix([
[0.5],
[1.0]])])]
The general solutions in x and y components are:
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$$\left[x(t) = 3.0C_1e^{-5t} + 3.0C_2e^{7t}, \quad y(t) = -6.0C_1e^{-5t} + 6.0C_2e^{7t}\right]$$

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Rememeber that the eiganvector associated with the solutin can be different as long as it has the
same ratio. The solution produced may not be in a different form from the textbook or webassign.

In [2]: runfile('G:/My Drive/Plebe Year(Drive)/Semester 1/IT/Grant- IT105 Project For Sub.py',
wdir='G:/My Drive/Plebe Year(Drive)/Semester 1/IT')
This calculator will provide you with prompt you to enter the a,b,c,and d values of a two by two
matrix which was extracted from a system of differential equations. The calculator will provide a
general solution to the system of diff eqs. It will also provide the eiganvalues and eiganvectors
given that you are runnnig the proper software.
From your system of differental equations. Extract the 2x2 matrix.

input a value of a 2x2 matrix:-1

input b value of a 2x2 matrix:1

input c value of a 2x2 matrix:8

input d value of a 2x2 matrix:1
The eiganvalues are:
{-3: 1, 3: 1}
The eiganvectors are:
[(-3.00000000000000, 1, [Matrix([
[-0.5],
[ 1.0]])]), (3.00000000000000, 1, [Matrix([
[0.25],
[ 1.0]])])]
The general solutions in x and y components are:
```

$$\left[x(t) = 1.0C_1e^{-3t} + 1.0C_2e^{3t}, \quad y(t) = -2.0C_1e^{-3t} + 4.0C_2e^{3t}\right]$$

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Rememeber that the eiganvector associated with the solutin can be different as long as it has the
same ratio. The solution produced may not be in a different form from the textbook or webassign.
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In [3]: runfile('G:/My Drive/Plebe Year(Drive)/Semester 1/IT/Grant- IT105 Project For Sub.py',
wdir='G:/My Drive/Plebe Year(Drive)/Semester 1/IT')
This calculator will provide you with prompt you to enter the a,b,c,and d values of a two by two
matrix which was extracted from a system of differential equations. The calculator will provide a
general solution to the system of diff eqs. It will also provide the eiganvalues and eiganvectors
given that you are runnnig the proper software.
From your system of differental equations. Extract the 2x2 matrix.

input a value of a 2x2 matrix:1

input b value of a 2x2 matrix:-1

input c value of a 2x2 matrix:4

input d value of a 2x2 matrix:-3
The eiganvalues are:
{-1: 2}
The eiganvectors are:
[(-1.00000000000000, 2, [Matrix([
[0.5],
[1.0]])])]
The general solutions in x and y components are:
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$$\left[x(t) = (-2.0C_1 - 2.0C_2t - 0.5C_2)e^{-1.0t}, \quad y(t) = (-4.0C_1 - 4.0C_2t + C_2)e^{-1.0t}\right]$$

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Rememeber that the eiganvector associated with the solutin can be different as long as it has the
same ratio. The solution produced may not be in a different form from the textbook or webassign.

In [4]: runfile('G:/My Drive/Plebe Year(Drive)/Semester 1/IT/Grant- IT105 Project For Sub.py',
wdir='G:/My Drive/Plebe Year(Drive)/Semester 1/IT')
This calculator will provide you with prompt you to enter the a,b,c,and d values of a two by two
matrix which was extracted from a system of differential equations. The calculator will provide a
general solution to the system of diff eqs. It will also provide the eiganvalues and eiganvectors
given that you are runnnig the proper software.
From your system of differental equations. Extract the 2x2 matrix.

input a value of a 2x2 matrix:-1

input b value of a 2x2 matrix:-2

input c value of a 2x2 matrix:8

input d value of a 2x2 matrix:-1
The eiganvalues are:
{-1 - 4*I: 1, -1 + 4*I: 1}
The eiganvectors are:
[(-1.0 - 4.0*I, 1, [Matrix([
[-0.5*I],
[   1.0]])]), (-1.0 + 4.0*I, 1, [Matrix([
[0.5*I],
[  1.0]])])]
The general solutions in x and y components are:
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$$\left[x(t) = -2.0(C_1\sin(4t) + C_2\cos(4t))e^{-t}, \quad y(t) = (4C_1\cos(4t) - 4C_2\sin(4t))e^{-t}\right]$$

```
Rememeber that the eiganvector associated with the solutin can be different as long as it has the
same ratio. The solution produced may not be in a different form from the textbook or webassign.

In [5]:
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