

Contents

- [Problem 4](#)
- [Solution to part a](#)
- [Solution to part b](#)

```
clear
close all
```

Problem 4

```
syms t
A = [-7, -12; 1, 0];
B = [1; 0];
C = [-4, -10];
D = 0;
x0 = [1; 2];
```

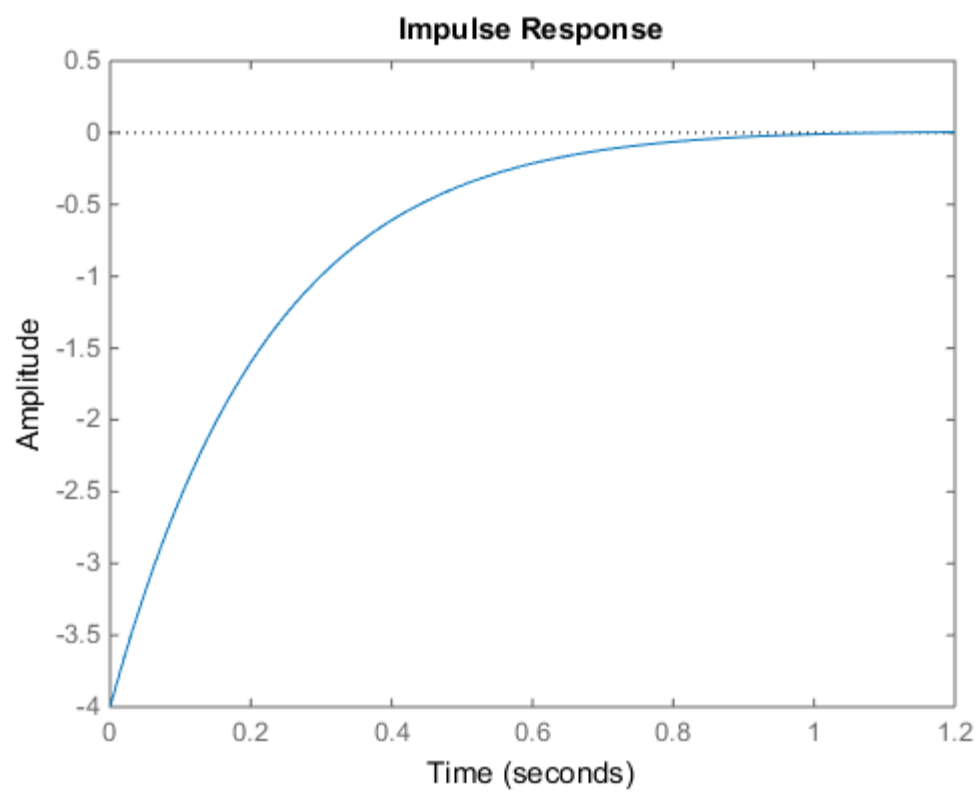
Solution to part a

```
pretty(expm(A*t)*x0)
```

$$\frac{\begin{vmatrix} \exp(-4t) 28 - \exp(-3t) 27 \\ \exp(-3t) 9 - \exp(-4t) 7 \end{vmatrix}}{\begin{vmatrix} \exp(-3t) 9 - \exp(-4t) 7 \\ \exp(-4t) 28 - \exp(-3t) 27 \end{vmatrix}}$$

Solution to part b

```
sys = ss(A, B, C, D);
impz(sys)
```



Published with MATLAB® R2014b