1. HW 1.5

Prove not using (1)’

Hence

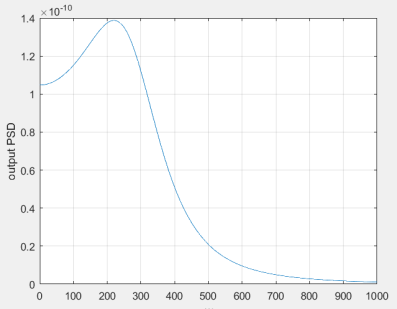
* Or

Since

We will use this formula,

Hence

1. HW 1.6
   1. prove the ex.6.13 : See the text book
   2. Plot

 : Some mistakes.

1. HW.2.1 : Prove the PSD of discrete system
2. HW.2.2: the non-causal filter example
   1. Write a code in the comments, run your code to check the result as in (2’)
   2. Non-causal filter is not a real time filter, It is batch – type filter. In the case of a real time filter, it is difficult to construct a constant phase filter(Really!), which means even if you may construct a Kalman filter, in the steady state, so that you may have a transfer function, but it is not a constant phase!!

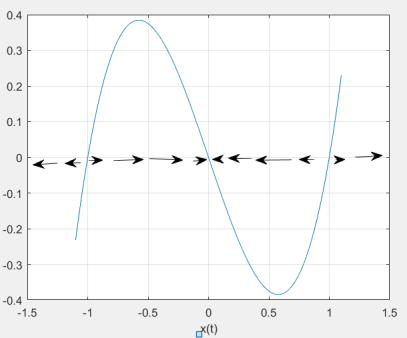
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1. HW. 2.3
   1. How about the other stationary points?

From (2’),

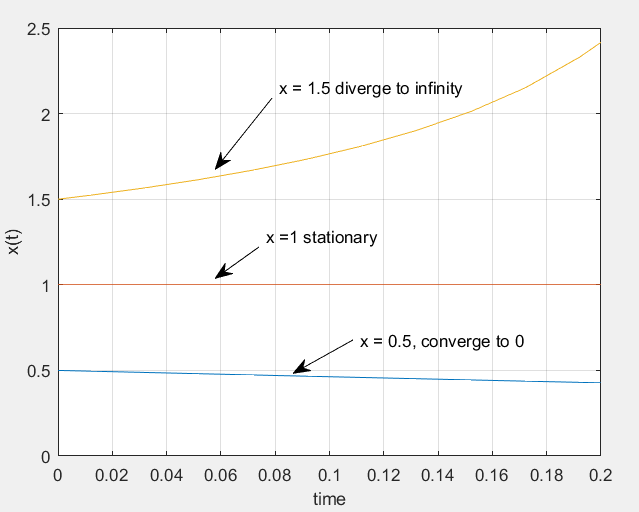
The others stationary points are

* 1. Draw the phase portraits



* 1. At the initial point draw the trajectory.

And 5.4



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