HW\_3

1. Problem :

1.1 Find pdf pdf of y : Let

SOL:

Since

If

Using changing variable method

Hence

* 1. Find

Sol: matlab cmd

* 1. 4th moment of Gaussian

Sol : Let

Now

Let

it follows

Integrating in part as

Hence using integral in part gives

Since

Once more using integral in part again

Now again changing variable yields

,

In conclusion, if . Hence in case of