**Home Work 4**

Dead line on Thursday 28/10/2015, only printed and emailed home works will be accepted.

**Question #1:**

**Imagine a signal travels through a transmission medium and its power is increased 10 times. Calculate the decibel.**

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**Question #2:**

**Using Shannon capacity, calculate maximum data rate of:**

**a) Telephone line with a signal-to-noise ratio of 30dB and bandwidth of 3 kHz.**

**b) Satellite TV channel with a signal-to noise ratio of 20 dB and a video bandwidth of 10MHz.**

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