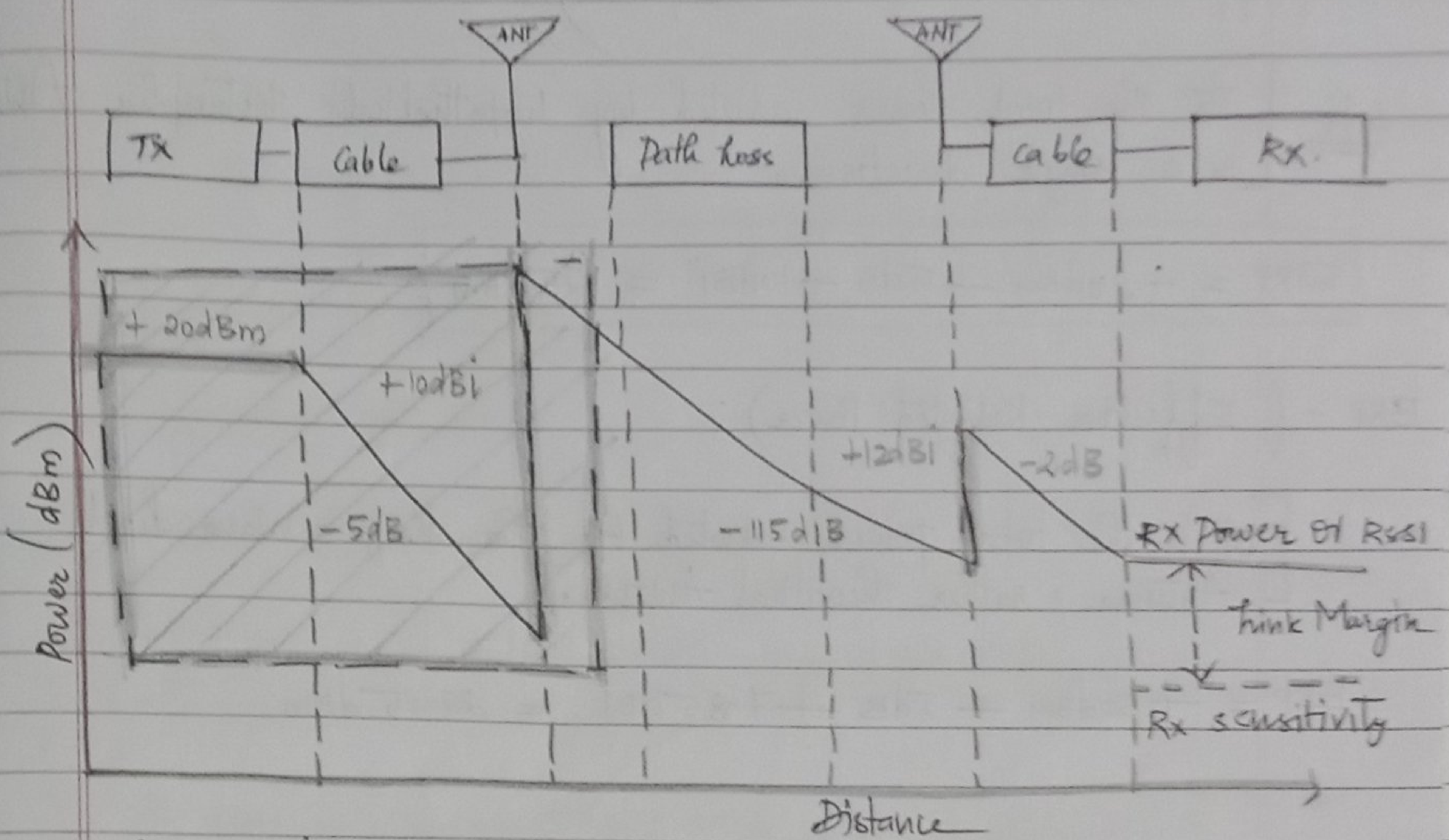
Tutorial 8: Link Budget and Link Margin



RSSI = (Receiver power)

+20dB − 5dB + 10dBi + 12dBi − 115dB − 2dB ⇒ −80dm

Rx sensitivity :- It is the lowest power level at which the power is sensed.

(−90 dBm)

LoRa Receiver sensitivity = −148dBm.

Link Margin + Receiver power > Receiver sensitivity

Receiver power − Rx sensitivity = Link Margin

Eg:-

Link Margin = Received power − Receiver sensitivity

Received power = −80dm.

Receiver sensitivity = −90dBm

Link Margin = −80 − (−90) = 10dBm = 10mW

Question

Receiver sensitivity (A) = −120dBm.

Received sensitivity (B) = −130dBm

(better)