

DNL: Compare step size (Differential Nonlinearity)

INL: Compare ~~absolute~~ Amplitude (Integral Nonlinearity)

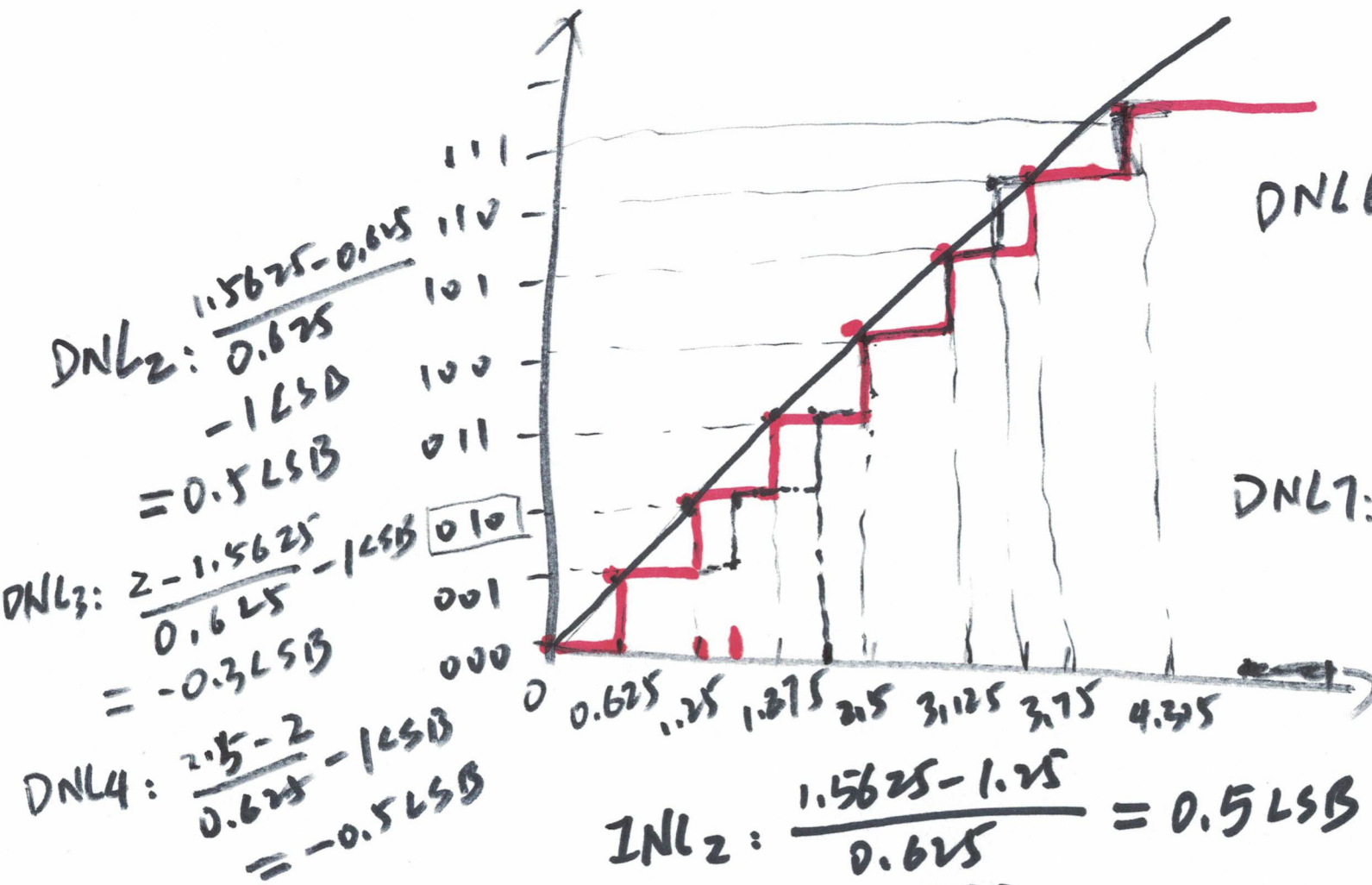
$$INL_2: \frac{1.5625 - 1.25}{0.625} = 0.5 \text{ LSB}$$

$$INL_3: \frac{2 - 1.875}{0.625} = 0.2 \text{ LSB}$$

$$INL_6: \frac{3.4375 - 3.75}{0.625} = -0.5 \text{ LSB}$$

ADC'S DNL, INL

Analog Input	Digital Output	Ideal Analog Input for the transition
0 V	000	0 V
0.625 V	001	0.625 V
1.5625 V	010	1.25 V
2 V	011	1.875 V
2.5 V	100	2.5 V
3.125 V	101	3.125 V
3.4375 V	110	3.75 V
4.375 V	111	4.375 V



$$DNL_6: \frac{3.4375 - 3.125}{0.625} - 1LSB = -0.5LSB$$

$$DNL_7: \frac{4.375 - 3.4375}{0.625} - 1LSB = 0.5LSB$$

$$INL_2: \frac{1.5625 - 1.25}{0.625} = 0.5LSB$$

$$INL_3: \frac{2 - 1.875}{0.625} = 0.2LSB$$

$$INL_6: \frac{3.4375 - 3.75}{0.625} = -0.5LSB$$