

**ELET 270 Instrumentation**  
**Exam 1 Formula Sheet**

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$$N = \sum_{i=0}^{n-1} d_i b^i$$

$$e = x_i - x_t$$

$$e_s = x_{avg} - x_t$$

$$e_r = |x_i - x_{avg}|$$

$$s = \frac{d(output)}{d(input)} = \frac{\Delta output}{\Delta input}$$

$$V_2 = aR \frac{5V}{1023}$$

$$V_2 = V_s \frac{R_2}{R_t + R_2}$$

$$R_t = R_2 \left( \frac{5V}{V_2} - 1 \right)$$

$$T = \frac{B}{\ln \left( \frac{R}{R_1} e^{\frac{B}{T_1}} \right)}$$

$$B = (A' A)^{-1} A' Y$$