

## Task 6

16-681 MRSD Project Course

Daniel Arnett

Karthik (Venkata Rama) Paga

Dicong (David) Qiu

Matthew Swenson

Abdul Zafar

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# 1 Regulator Efficiency

Linear voltage regulator efficiency is given by  $1 - \frac{V_{in} - V_{out}}{V_{in}}$ . So:

$$\eta_{3.3V} = 1 - \frac{24V - 3.3V}{24V} = .1375$$

$$\eta_{5V} = 1 - \frac{24V - 5V}{24V} = .20833$$

$$\eta_{12V} = 1 - \frac{24V - 12V}{24V} = .5$$

## 1.1 Question 1