5.1b Estimating with Finite Sums

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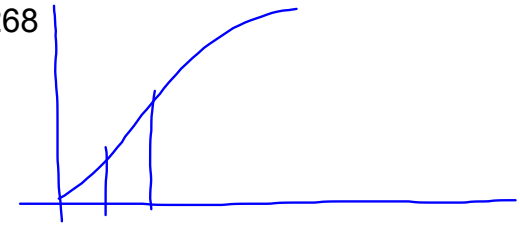
Secs	Dye
5	0
7	3.8
9	8
11	6.1
13	3.6
15	2.3
17	1.45
19	.91
21	.57
23	.36
25	.23
27	.14
29	.09
31	0



LRAM

$2(0)+2(3.8)+2(8)+\cdots 2(.09)$

$2(0+3.8+8+\cdots .09)$

RRAM

$2(3.8)+2(8)+\cdots 2(0)$

$\ln\left(\frac{1}{1-x}\right)$

$\frac{1}{\frac{1}{1-x}} \cdot \frac{1-x}{1} \quad \frac{-1}{(1-x)^2} \cdot -1$

$\frac{1}{1-x}$

$(1-x)\frac{1}{(1-x)^2} = \frac{1}{1-x}$

6. $x = t^3 - t$

$y = \sqrt{3t+1}$

$$\left.\frac{\frac{1}{2}(3t+1)^{-\frac{1}{2}} \cdot 3}{3t^2 - 1}\right|_{t=1}$$

$$\frac{\frac{3}{2}(4)^{-\frac{1}{2}}}{2} = \frac{3}{2 \cdot 2 \cdot 2} = \frac{3}{8}$$

7.

$y = \frac{1}{4}(x+1) - 6$

$4\left(y = -\frac{1}{4}x - \frac{1}{4} - 6\right)$

$4y = -x - 1 - 24$

$4y = -x - 25$

$x + 4y = -25$

$$\ln e^{2x} = 2x \ln e = 2x$$

$$2$$

$$\frac{1}{e^{2x}} \cdot e^{2x} \cdot 2 = 2$$