

## Assignment 4 Part 2

Saturday, January 30, 2016 3:01 PM

David Yan

$$\begin{aligned} \text{5.1 21} \quad \sum_{m=0}^3 \frac{1}{2^m} &= \frac{1}{2^0} + \frac{1}{2^1} + \frac{1}{2^2} + \frac{1}{2^3} \\ &= \frac{1}{1} + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} \\ &= 1 + \frac{4}{8} + \frac{2}{8} + \frac{1}{8} = 1\frac{7}{8} \end{aligned}$$

$$\begin{aligned} \text{5.1 60} \quad 2 \cdot \sum_{k=1}^n (3k^2 + 4) + 5 \sum_{k=1}^n (2k^2 - 1) \\ &= \sum_{k=1}^n 2(3k^2 + 4) + \sum_{k=1}^n 5(2k^2 - 1) \\ &= \sum_{k=1}^n 6k^2 + 8 + 10k^2 - 5 \\ &= \sum_{k=1}^n (16k^2 + 3) \end{aligned}$$