

Devin Gendron

HW 4.2 - pgs 227-233, 234-236

Set 5.1 - 21, 60

$$21. \sum_{m=0}^3 \frac{1}{2^m}$$

$$= 1/(2^0) + 1/(2^1) + 1/(2^2) + 1/(2^3)$$

$$= 1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8}$$

$$= \frac{15}{8}$$

$$60. 2 \cdot \sum_{k=1}^n (3k^2 + 4) + 5 \cdot \sum_{k=1}^n (2k^2 - 1)$$

$$(\text{n when } k=1) \sum 6(k^2) + 8 (\text{n when } k=1) \sum 10(k^2) - 5$$

$$= \sum (6(k^2) + 8) + \sum (10(k^2) - 5)$$

$$= \sum 6(k^2) + 3 + 10(k^2)$$

$$= \sum 16k^2 + 3$$

or

$$= \sum 4k + \sqrt{3}$$