Assignment 5 Part 2 5.1: 21, 60

Thursday, February 2, 2017 11:43 PM

21. $\sum_{m=6}^{3} \frac{1}{2^m} = \frac{1}{2^0} + \frac{1}{2^1} + \frac{1}{2^2} + \frac{1}{2^3} = 1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} = \boxed{\frac{15}{8}}$

Compute summation.

$12 + 3 = 15$

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

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

Write as a single summation

$= \sum_{k=1}^{n} (6k^2+8) + \sum_{k=1}^{n} (10k^2-1)$

$= \sum_{k=1}^{n} (6k^2+8) + (10k^2-1)$

$= \sum_{k=1}^{n} (16k^2+3)$