





*Sequences, Series and Sigma Notation*Text Answers

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**5 Sigma Notation**

1. (a) 55 (b) 1300 (c) 731

2. (a)  $\sum_{r=1}^6 \frac{(-1)^{r+1}}{r}$  (b)  $\sum_{r=1}^{12} (-1)^r r^2$  (c)  $\sum_{r=0}^{50} 12(-0.2)^r$

3. (a) 84 (d) 32 (e) 44 (f) 36 (other parts cannot be calculated)

4. (a)  $\sum_{r=1}^{20} r = 210$  (b)  $\sum_{r=1}^{10} r^2 = 385$

(c)  $2 \sum_{r=1}^{15} r^2 = 2480$  (d)  $2 \sum_{r=1}^{50} r = 2550$

(e)  $\sum_{r=1}^{13} (2r-1) = 169$  (f)  $\sum_{r=1}^{10} r^3 = 3025$

5. 165

6. (a) 4515 (b) 13959 (c) 861

7. 6461