Sigma Notation – Assignment

For each problem, determine the sum of generating each term and calculate using the calculator.

1. $\sum_{i=1}^{6}(3i-2)$ = 51

2. $\sum_{j=1}^{60}10$ = 600

3. $\sum_{k=1}^{10}(k-1)^2$ = 285

4. $\sum_{k=1}^{10}k^2-1$ = 375

5. $\sum_{i=1}^{5}(i+1)(2i-3)$ = 80

6. $\sum_{i=1}^{7}\frac{i-2}{i+2}$ = $\frac{1061}{630}$

7. $\sum_{i=1}^{6}\frac{4}{i^2+2}$ = $\frac{16022}{5643}$

8. $\sum_{i=1}^{25}(-1)^i 5$ = -5

9. $\sum_{i=1}^{5}\left[i^3-(i+1)^2\right]$ = 135

Use your formulas and calculators to calculate the values of the following.

10. $\sum_{i=1}^{27}6i$

2268

11. $\sum_{i=1}^{20}i^2$

2870

12. $\sum_{i=1}^{20}(i^2-1)$

2850

13. $\sum_{i=1}^{35}(i+4)^2$

20510

14. $\sum_{i=1}^{30}(i^3-i)$

215760

15. $\sum_{i=1}^{30}(i^3-i^2)$

206770

16. $\sum_{i=1}^{50}(2i^2-8i+4)$

75850

17. $\sum_{i=10}^{20}i^2$

2585

18. $\sum_{i=25}^{50}(2i^2-i)$

75075