

### Sigma Notation Practice

Your life in the first two weeks of this course will be significantly easier if you learn to use the notation properly and if you are organized and complete on your homework. For instance, you should practice using sigma notation (Here is a quick exercise). Each expression below evaluates to a given number, see if you can pair up each value with the correct expression (Solutions are on the last page):

- |  |       |
|--|-------|
| A. $\sum_{k=1}^4 k$                      | a. -2 |
| B. $\sum_{i=2}^3 i^2$                    | b. -1 |
| C. $\sum_{i=9}^{10} \frac{90}{i}$        | c. 0  |
| D. $\sum_{i=1}^1 \ln(i)$                 | d. 4  |
| E. $\sum_{k=-1}^3 (k+1)!$                | e. 10 |
| F. $\sum_{n=1}^3 (-1)^n$                 | f. 13 |
| G. $\sum_{j=1}^3 j \cos(\pi j)$          | g. 16 |
| H. $\sum_{k=0}^2 \frac{(2k+1)^2 - 1}{2}$ | h. 19 |

Solutions on next page.

**Solutions to the Sigma Notation Exercise A-e, B-f, C-h, D-c, E-d, F-b, G-a, H-g.**