

**Aim:** Become proficient in looping and numerical calculations. For each of the following, calculate S

1.  $S = 1+2+3+4+\dots+1000$
2.  $S = 1+1/2+1/3+1/4+\dots + 1/1000$
3.  $S = 1+2^2+3^2+4^2+\dots+1000^2$
4.  $S = 1+1/2^3+1/3^3+ \dots + 1/1000^3$
5.  $S = 1-2+3-4+5-6+\dots +99 - 100$
6.  $S = 1-1/2+1/3-1/4+1/5-1/6+\dots +1/99-1/100$

For each, print the time it takes for each calculation.