Q1) Evaluate the limit.

I. $\displaystyle \lim_{n\to\infty} \frac{2}{n} \sum_{i=1}^{n}\left(1+\frac{i^2}{n^2}\right)$

Q2) Express the integral as a limit of Riemann sum (**Do not evaluate the limit**)

I. $\displaystyle \int_{3}^{4} \frac{\ln x}{x} dx$

Q3) Estimate the area under the curve $y = x^3 + 1$ from $x = -1$ to $x = 3$, using 4 approximating rectangles and the sample point to be the left end point (i.e. find L_4).