N 2.3

$\frac{1}{H_n} = n^{-1}\sum_{i=1}^{n} x_i^{-1}$ $n \gg 1 \Rightarrow$ выполнение ЦПТ для $\frac{1}{n}\sum_{i=1}^{n} x_i^{-1}$

$\Rightarrow P_n\left(\frac{1}{H_n}\right) \longrightarrow N\left(\mu_x, \frac{\sigma_x^2}{n}\right)$ $X_n = \frac{1}{H_n}$;

$\left\langle\frac{1}{x}\right\rangle$ $\mu_x = \mu_{x_n}$; $\sigma_{x_n}^2 = \frac{\sigma_x^2}{n} = \frac{1}{n}\left[\left\langle\frac{1}{x^2}\right\rangle - \left(\left\langle\frac{1}{x}\right\rangle\right)^2\right]$

$\Rightarrow P_n\left(\frac{1}{H_n}\right) \longrightarrow \frac{\sqrt{n}}{\left\langle\frac{1}{x^2}\right\rangle - \left(\left\langle\frac{1}{x}\right\rangle\right)^2} \cdot \exp\left[-n\frac{\left(\frac{1}{H_n} - \cancel{\mu}\left\langle\frac{1}{x}\right\rangle\right)}{2\left(\left\langle\frac{1}{x^2}\right\rangle - \left(\left\langle\frac{1}{x}\right\rangle\right)^2\right)}\right]$

$P_n(H_n) = P_n\left(\frac{1}{H_n}\right)\cdot\left|\frac{\partial\frac{1}{H}}{\partial H}\right| = \frac{1}{H_n^2}P_n\left(\frac{1}{H_n}\right)$

$P_n(H) = \frac{1}{H_n^2}\cdot\frac{\sqrt{n}}{\left\langle\frac{1}{x^2}\right\rangle - \left(\left\langle\frac{1}{x}\right\rangle\right)^2}\cdot\exp\left[-n\frac{\left(\frac{1}{H_n} - \left\langle\frac{1}{x}\right\rangle\right)}{2\left(\left\langle\frac{1}{x^2}\right\rangle - \left(\left\langle\frac{1}{x}\right\rangle\right)^2\right)}\right]$