Fişa individualizată – 1

Clasa a XI-a

Calculaţi limitele:

1) $\lim\limits_{n\to\infty}\left[3^n-\left(\frac{1}{3}\right)^n\right]$

2) $\lim\limits_{n\to\infty}\left(\sqrt{n^2-n+1}-\sqrt{n^2+n+1}\right)$

3) $\lim\limits_{n\to\infty}\left(\frac{n^2+2n}{n+1}-\frac{n^2+2}{n-1}\right)$

4) $\lim\limits_{n\to\infty}\frac{\sum_{k=1}^{n}(2k-1)}{2n^2-1}$

5) $\lim\limits_{n\to\infty}\frac{2^n-3^n}{7^n+6^n}$

6) $\lim\limits_{n\to\infty}\sqrt[3]{\frac{27n^3+1}{n^3-n+1}}$

7) $\lim\limits_{n\to\infty}\left(\frac{3n-1}{n+1}\right)^{\frac{n^2}{n-1}}$

8) $\lim\limits_{n\to\infty}\log_3\frac{(n-1)(3n-1)}{9n^2-1}$

9) $\lim\limits_{n\to\infty}\left(\frac{n-1}{n+1}\right)^{3n+1}$

10) $\lim\limits_{n\to\infty}\left(\frac{n^2-n-1}{n^2+1}\right)^{\frac{n^2}{n+1}}$

11) $\lim\limits_{n\to\infty}\frac{1}{n}\cdot\ln n$

12) $\lim\limits_{n\to\infty}\left(n-\sqrt[3]{n^3+n^2+n+1}\right)$