5.2.6. Ketma-ketlikning limitini toping:

1) $x_n = \dfrac{5-n^2}{3+2n^2}$;

2) $x_n = \dfrac{3n^2+2}{4-n^3}$;

3) $x_n = \dfrac{3n+n^3}{2n^2+3n+7}$;

4) $x_n = \left(\dfrac{2n^2+3n-1}{n^2-2n+1}\right)^3$;

5) $x_n = \dfrac{(n+2)^2 - (2-n)^2}{2n+7}$;

6) $x_n = \dfrac{(n+1)^3 - (n-1)^3}{3n^2+2}$;

7) $x_n = \dfrac{3n^3}{1+3n^2} + \dfrac{1-5n^2}{5n+1}$;

8) $x_n = \dfrac{3}{n+2} - \dfrac{5n}{2n+1}$;

9) $x_n = \sqrt{n+2} - \sqrt{n-2}$;

10) $x_n = \sqrt{n^2+n} - \sqrt{n^2-n}$;

11) $x_n = \sqrt{n(n-5)} - n$;

12) $x_n = \sqrt[3]{n^3 - 4n^2} - n$;

13) $x_n = \dfrac{2n+1}{\sqrt[3]{n^2+n+5}}$;

14) $x_n = \dfrac{\sqrt[3]{n^4-1}}{\sqrt{n+1}}$;

15) $x_n = \dfrac{n!+(n+1)!}{(n+1)!-2n!}$;

16) $x_n = \dfrac{(2n+1)!+(2n+2)!}{(2n+3)!-(2n+2)!}$;

17) $x_n = \dfrac{2-5+4-7+\ldots+2n-(2n+3)}{n+5}$;

18) $x_n = \dfrac{1+2+3+\ldots+n}{n^2-2n+1}$;

19) $x_n = \dfrac{1}{1\cdot 7} + \dfrac{1}{7\cdot 13} + \ldots + \dfrac{1}{(6n-5)(6n+1)}$;

20) $x_n = \dfrac{1}{2\cdot 4} + \dfrac{1}{4\cdot 6} + \ldots + \dfrac{1}{2n(2n+2)}$;

21) $x_n = \dfrac{3^{\frac{1}{n}} - 1}{3^{\frac{1}{n}} + 1}$.

22) $x_n = \dfrac{6\cdot 6^n + 5}{2\cdot 3^n + 1} - 3^{n+1}$;

23) $x_n = \dfrac{3}{4} + \dfrac{5}{16} + \dfrac{9}{64} + \ldots + \dfrac{1+2^n}{4^n}$;

24) $x_n = \dfrac{1+3+9+\ldots+3^{n-1}}{2\cdot 3^{n+2}+5}$;

25) $x_n = \dfrac{1}{n}\cos n^2 - \dfrac{3n}{6n+1}$;

26) $x_n = \dfrac{1}{n}\sin n^3 + \dfrac{2n^2}{n^2-1}$;

27) $x_n = \left(1 - \dfrac{1}{n}\right)^n$;

28) $x_n = \left(\dfrac{n-1}{1+n}\right)^{2n-5}$;

29) $x_n = \left(\dfrac{2n+1}{2n-1}\right)^{3n-4}$;

30) $x_n = \left(\dfrac{n^2-1}{n^2+1}\right)^{3n-n^2}$.