

GIỚI HẠN DÃY SỐ

- 1) $\lim \frac{6n^3 - 2n + 1}{n^3 - 2n}$ 2) $\lim \frac{1 - n + 2n^2}{5n^2 + n}$ 3) $\lim \frac{2n^3 - 4n^2 + 3n + 3}{n^3 - 5n + 7}$ 4) $\lim \frac{-2n^2 + n + 2}{3n^4 + 5}$
 5) $\lim \frac{n^2 + 4n - 5}{3n^3 + n^2 + 7}$ 6) $\lim \frac{n^5 + n^4 - n - 2}{4n^3 + 6n^2 + 9}$ 7) $\lim \frac{7n^2 - 3n + 2}{n^2 + 5}$ 8) $\lim \frac{3n^3 + 2n - 1}{2n^2 - n}$
 9) $\lim \left(\frac{2n^3}{2n^2 + 3} + \frac{1 - 5n^2}{5n + 1} \right)$ 10) $\lim \frac{-3n^5 + 7n^3 - 11}{n^5 + n^4 - 3n}$ 11) $\lim \frac{2n^2 - 3}{n^6 + 5n^5}$ 12) $\lim \frac{\sqrt{2n^2 - n}}{1 - 3n^2}$
 13) $\lim \frac{\sqrt[3]{n^3 + n}}{n + 2}$ 14) $\lim \frac{\sqrt{2n^4 + 3n - 2}}{2n^2 - n + 3}$ 15) $\lim \frac{\sqrt[3]{n^6 - 7n^3 - 5n + 8}}{n + 12}$ 16) $\lim \frac{\sqrt{n^2 + 1} - \sqrt{n + 1}}{3n + 2}$
 17) $\lim (3n^3 - 7n + 11)$ 18) $\lim \sqrt{2n^4 - n^2 + n + 2}$ 19) $\lim \sqrt[3]{1 + 2n - n^3}$ 20) $\lim \frac{1 + 2 + \dots + n}{n^2}$
 21) $\lim \frac{n\sqrt{2 + 4 + \dots + 2n}}{3n^2 + n - 2}$ 22) $\lim \frac{1^3 + 2^3 + \dots + n^3}{n^4 + n^3 + 3n + 2}$ 23) $\lim \frac{n\sqrt{1 + 3 + \dots + (2n - 1)}}{2n^2 + n + 1}$
 24) $\lim \frac{\sqrt{1^3 + 2^3 + \dots + n^3}}{1 \ln^2 + n + 2}$, $1^3 + 2^3 + \dots + n^3 = \frac{n^2(n + 1)^2}{4}$ 25) $\lim \frac{1 + \frac{2}{3} + \left(\frac{2}{3}\right)^2 + \dots + \left(\frac{2}{3}\right)^n}{1 + \frac{1}{5} + \left(\frac{1}{5}\right)^2 + \dots + \left(\frac{1}{5}\right)^n}$
 26) $\lim \frac{4^n}{2 \cdot 3^n + 4^n}$ 27) $\lim \frac{3^n + 1}{2^n - 1}$ 28) $\lim \frac{3^n - 2 \cdot 5^n}{7 + 3 \cdot 5^n}$ 29) $\lim \frac{4^n - 5^n}{2^n + 3 \cdot 5^n}$ 30) $\lim \frac{(-3)^n + 5^n}{(-3)^{n+1} + 5^{n+1}}$
 31) $\lim (\sqrt{3n - 1} - \sqrt{2n - 1})$ 32) $\lim (\sqrt{n + 1} - \sqrt{n})\sqrt{n}$ 33) $\lim (\sqrt{n^2 + n + 1} - n)$ 34) $\lim n^2 (n - \sqrt{n^2 + 1})$
 35) $\lim (\sqrt{n^2 + n + 2} - \sqrt{n + 1})$ 36) $\lim (\sqrt{n^2 + 3} - \sqrt{n - 5})$ 37) $\lim \frac{1}{\sqrt{n + 2} - \sqrt{n + 1}}$

GIỚI HẠN HÀM SỐ

1. $\lim_{x \rightarrow 2} (3x^2 + 7x + 11)$ 2. $\lim_{x \rightarrow 1} \frac{(7x + 11)x}{4x^2 + 2}$ 3. $\lim_{x \rightarrow -2} \frac{(3x + 1)(2 - 3x)}{x + 1}$ 4. $\lim_{x \rightarrow 0} 2x \left(1 - \frac{7x + 11}{x} \right)$
 5. $\lim_{x \rightarrow \sqrt{3}} |x^2 - 4|$ 6. $\lim_{x \rightarrow 9} \frac{\sqrt{x} - 3}{9x - x^2}$ 7. $\lim_{x \rightarrow -\infty} \frac{3x^2 - x + 5}{x^3 - 2}$ 8. $\lim_{x \rightarrow -\infty} \frac{2x^4 - 3x + 5}{x^4 - 2x^2}$
 9. $\lim_{x \rightarrow +\infty} \frac{\sqrt{3x^6 - 2x^5 + 5}}{3x^3 - 2}$ 10. $\lim_{x \rightarrow -\infty} \frac{\sqrt{x^6 - 5x + 1}}{5x^3 - 2}$ 11. $\lim_{x \rightarrow -\infty} \sqrt[3]{\frac{x^2 + 5}{6x^2 - 3x + 2}}$ 12. $\lim_{x \rightarrow 3^+} \frac{|3 - x|}{3 - x}$
 13. $\lim_{x \rightarrow 3^-} \frac{|3 - x|}{3 - x}$ 14. $\lim_{x \rightarrow 3} \frac{|3 - x|}{3 - x}$ 15. $\lim_{x \rightarrow 0^+} \frac{x + 2\sqrt{x}}{x - \sqrt{x}}$ 16. $\lim_{x \rightarrow 2^-} \frac{4 - x^2}{\sqrt{2 - x}}$ 17. $\lim_{x \rightarrow -\sqrt{2}} \frac{x^3 + 2\sqrt{2}}{x^2 - 2}$
 18. $\lim_{x \rightarrow 3} \frac{x^4 - 27x}{2x^2 - 3x - 9}$ 19. $\lim_{x \rightarrow -2} \frac{x^4 - 16}{x^2 + 6x + 8}$ 20. $\lim_{x \rightarrow +\infty} \sqrt[3]{\frac{2x^5 + x^3 - 1}{(2x^2 - 1)(x^3 + x)}}$ 21. $\lim_{x \rightarrow -\infty} \frac{\sqrt{x^2 + x + 2x}}{2x + 3}$
 22. $\lim_{x \rightarrow +\infty} (x + 1) \sqrt{\frac{x}{2x^4 + x^2 + 1}}$ 23. $\lim_{x \rightarrow +\infty} (2x^3 - 5x^2 + 3x - 1)$ 24. $\lim_{x \rightarrow +\infty} \sqrt{2x^4 - 5x^2 + 1}$

25. $\lim_{x \rightarrow 2^+} \frac{2x+1}{x-2}$ 26. $\lim_{x \rightarrow 2^-} \frac{2x+1}{x-2}$ 27. $\lim_{x \rightarrow +\infty} (2x^3 - 5x^2 + 3x - 1)$ 28. $\lim_{x \rightarrow +\infty} \frac{x^3 - 5}{x^2 + 1}$
 29. $\lim_{x \rightarrow 2} \frac{x^3 - 8}{x^2 - 4}$ 31. $\lim_{x \rightarrow (-3)^-} \frac{2x^2 + 5x - 3}{(x+3)^2}$ 32. $\lim_{x \rightarrow 0} \frac{\sqrt{x^3 + 1} - 1}{x^2 + x}$ 33. $\lim_{x \rightarrow +\infty} \frac{2x^2 + x + 10}{9 - 3x^3}$
 34. $\lim_{x \rightarrow -\sqrt{3}} \frac{x^3 + 3\sqrt{3}}{x^2 - 3}$ 35. $\lim_{x \rightarrow 4} \frac{\sqrt{x} - 2}{x^2 - 4x}$ 36. $\lim_{x \rightarrow 1^+} \frac{\sqrt{x} - 1}{x^2 - x}$ 37. $\lim_{x \rightarrow 0} \frac{\sqrt{x^2 + x + 1} - 1}{3x}$
 38. $\lim_{x \rightarrow 3^-} \frac{3 - x}{\sqrt{27 - x^3}}$ 39. $\lim_{x \rightarrow 2^+} \frac{\sqrt{x^3 - 8}}{x^2 - 2x}$ 40. $\lim_{x \rightarrow 2} \frac{x^2 + 3x - 10}{3x^2 - 5x - 2}$ 41. $\lim_{x \rightarrow 2} \frac{x^2 - 4}{x - 2}$ 42. $\lim_{x \rightarrow 1} \frac{x^2 - 4x + 3}{(x-1)^2}$
 43. $\lim_{x \rightarrow 1} \frac{x-1}{1-\sqrt{x}}$ 44. $\lim_{x \rightarrow 3} \frac{x^2 + 2x - 15}{x - 3}$ 45. $\lim_{x \rightarrow -5} \frac{x^2 + 2x - 15}{x + 5}$ 46. $\lim_{x \rightarrow 1} \frac{x^3 - 1}{x(x+5) - 6}$ 47. $\lim_{x \rightarrow -4} \frac{x^2 + 3x - 4}{x^2 + 4x}$
 48. $\lim_{x \rightarrow -4} \frac{x^2 - 5x + 6}{x^2 - 12x + 20}$ 49. $\lim_{x \rightarrow -2} \frac{x^3 + 3x^2 + 2x}{x^2 - x - 6}$ 50. $\lim_{x \rightarrow 1} \frac{x^4 - 1}{x^2 + 2x - 3}$ 51. $\lim_{x \rightarrow -2} \frac{x^3 + 4x^2 + 4x}{x^2 - x - 6}$
 52. $\lim_{x \rightarrow 2} \frac{\sqrt{x^2 + 5} - 3}{x - 2}$ 53. $\lim_{x \rightarrow 7} \frac{\sqrt[4]{x+9} - 2}{x - 7}$ 54. $\lim_{x \rightarrow 5} \frac{5 - x}{\sqrt{5} - \sqrt{x}}$ 55. $\lim_{x \rightarrow 2} \frac{\sqrt{3x-5} - 1}{x - 2}$
 56. $\lim_{x \rightarrow 0} \frac{x}{\sqrt{1+x} - 1}$ 57. $\lim_{x \rightarrow -1} \frac{x+1}{\sqrt{6x^2+3}+3x}$ 58. $\lim_{x \rightarrow 0} \frac{\sqrt{1+x+x^2} - 1}{x}$ 59. $\lim_{x \rightarrow 5} \frac{\sqrt{x+4} - 3}{x^2 - 25}$
 60. $\lim_{x \rightarrow 0} \frac{\sqrt{1-2x+x^2} - (1+x)}{x}$ 61. $\lim_{x \rightarrow 3} \frac{x-3}{\sqrt{2x+10} - 4}$ 62. $\lim_{x \rightarrow 6} \frac{\sqrt{x-2} - 2}{x-6}$ 63. $\lim_{x \rightarrow 1} \frac{2x - \sqrt{3x+1}}{x^2 - 1}$
 64. $\lim_{x \rightarrow 1} \frac{\sqrt{x} - 1}{x^2 + 2x - 3}$ 65. $\lim_{x \rightarrow 0} \frac{\sqrt{5+x} - \sqrt{5-x}}{x}$ 66. $\lim_{x \rightarrow 0} \frac{\sqrt{1+x} - \sqrt{1-x}}{x}$ 67. $\lim_{x \rightarrow 1} \frac{\sqrt{2x-1} - \sqrt{x}}{x-1}$
 68. $\lim_{x \rightarrow 0} \frac{\sqrt{1+x} - \sqrt{x^2+x+1}}{x}$ 69. $\lim_{x \rightarrow 1} \frac{\sqrt{3x-2} - \sqrt{4x^2-x-2}}{x^2 - 3x + 2}$ 70. $\lim_{x \rightarrow 0} \frac{\sqrt{1-3x+x^2} - \sqrt{1+x}}{x}$
 71. $\lim_{x \rightarrow 4} \frac{3 - \sqrt{5+x}}{1 - \sqrt{5-x}}$ 72. $\lim_{x \rightarrow 2} \frac{x - \sqrt{x+2}}{\sqrt{4x+1} - 3}$ 73. $\lim_{x \rightarrow 1} \frac{x^2 - \sqrt{x}}{\sqrt{x} - 1}$ 74. $\lim_{x \rightarrow -1} \frac{\sqrt[3]{x} + 1}{\sqrt{x^2+3} - 2}$ 75. $\lim_{x \rightarrow 0} \frac{\sqrt{4-x^2} - 2}{\sqrt{9-x^2} - 3}$
 76. $\lim_{x \rightarrow 9} \frac{\sqrt{7+2x} - 5}{\sqrt{x} - 3}$ 77. $\lim_{x \rightarrow +\infty} \frac{x^2 + 3x - 10}{3x^2 - 5x - 2}$ 78. $\lim_{x \rightarrow -\infty} \frac{x^2 - 4}{x^3 - 2}$ 79. $\lim_{x \rightarrow +\infty} \frac{x^2 - 4x + 3}{(x-1)^2}$
 80. $\lim_{x \rightarrow -\infty} \frac{\sqrt{x^2 + 2x - 15}}{x + 5}$ 81. $\lim_{x \rightarrow +\infty} \sqrt{\frac{x^2 - 1}{x(x+5) - 6}}$ 82. $\lim_{x \rightarrow -\infty} \frac{x^2 + 3x - 4}{\sqrt{x^4 + 4x}}$ 83. $\lim_{x \rightarrow +\infty} \frac{\sqrt{x^4 - 5x^3 + 6}}{x^2 - 12x + 20}$
 84. $\lim_{x \rightarrow -\infty} \frac{x^3 + 3x^2 + 2x}{x^5 - x - 6}$ 85. $\lim_{x \rightarrow -\infty} \frac{x-1}{x^2 + 2x - 3}$ 86. $\lim_{x \rightarrow -\infty} \frac{\sqrt[3]{x^6 - 4x^4 + 4}}{x^2 - x - 6}$
 87. $\lim_{x \rightarrow -2^+} \frac{\sqrt{8+2x} - 2}{\sqrt{x} + 2}$ 88. $\lim_{x \rightarrow 0^+} \frac{2\sqrt{x} - 3x}{3\sqrt{x} - 2x}$ 89. $f(x) = \begin{cases} 3x-1 & ; x \leq 1 \\ x^2+1 & ; x > 1 \end{cases}$ tìm. $\lim_{x \rightarrow 1} f(x)$
 90. $f(x) = \begin{cases} mx^2 & ; x \leq 2 \\ 3 & ; x > 2 \end{cases}$ tìm $\lim_{x \rightarrow 2} f(x)$ 91. $f(x) = \begin{cases} |x^2 - 5x + 6| & ; x > 2 \\ mx + 4 & ; x \leq 2 \end{cases}$ tìm m để hàm số có giới hạn
 khi $x \rightarrow 2$
 92. $\lim_{x \rightarrow +\infty} x(\sqrt{x^2+1} - \sqrt{x^2-2})$ 93. $\lim_{x \rightarrow +\infty} (\sqrt{x^2-7x+1} - \sqrt{x^2-3x+2})$ 94. $\lim_{x \rightarrow +\infty} (\sqrt{x^2-4x+1} - \sqrt{x^2-9x})$
 95. $\lim_{x \rightarrow +\infty} (\sqrt{x^2-2x+1} - \sqrt{x^2-6x+3})$ 96. $\lim_{x \rightarrow +\infty} (x-4 - \sqrt{x^2-7x+2})$

- 1, $\lim \frac{n^2 - 2n + 1}{3n^2 + n - 3}$
- 2, $\lim \frac{(n+1)(n+2)}{-n^2 + 3n - 1}$
- 3, $\lim \frac{(n+1)(2n-5)}{(3n-1)(n+2)}$
- 4, $\lim \frac{n\sqrt{n} - n + 1}{n^2 + 3}$
- 5, $\lim \frac{n^3 - 4n + 1}{-4n^3 + n^2 - 2}$
- 6, $\lim \frac{n+3}{n+(-1)^n}$
- 7, $\lim \sqrt{\frac{4n+6}{n-1}}$
- 8, $\lim \frac{(n+1)^2 - 3n}{(2n-1)^2}$
- 9, $\lim \frac{(n+1)^4 - (n-1)^4}{(n+1)^4 + (n-1)^4}$
- 10, $\lim \frac{(n^2-1)(3n+2)}{-n^3 + 2n - 1}$
- 11, $\lim \frac{(n^2+3n+6)(2n^2-n-1)}{8n^4 + 4n^3 - 1}$
- 12, $\lim \frac{(n^2-3)(-2n^2+4n-1)}{(6n^3+2n-1)(2n-1)}$
- 13, $\lim \frac{\sqrt{4n^2+n+1}}{-n-3}$
- 14, $\lim \frac{\sqrt{n^2+1}-3n-1}{-6n-\sqrt{n}+1}$
- 15, $\lim \frac{\sqrt{n^3+n^2-2n-4n}}{-2n\sqrt{n}-4n+1}$
- 16, $\lim \frac{(2n-1)^{2007} - 1}{n^{2007} - 3n^{2000}}$
- 17, $\lim \frac{(3n-1)(n^2+2)(-3n^3-1)}{(2n^2+1)^3}$
- 18, $\lim \frac{\sqrt{n+1}-2}{\sqrt{n}+3}$
- 19, $\lim \frac{\sqrt[3]{8n^3+2n-1}+3n}{2n-4\sqrt{n}+7}$
- 20, $\lim \frac{\sqrt{2n^2+1}-\sqrt{n^2+1}}{n+1}$
- 21, $\lim \frac{1+2+3+\dots+n}{n^2}$
- 22, $\lim \frac{n\sqrt{1+3+5+\dots+(2n+1)}}{3n^2-n+1}$
- 23, $\lim \frac{\sqrt{n^3+1}-\sqrt{n^2+2n}}{3n\sqrt{n}-2n+1}$
- 24, $\lim \frac{n(\sqrt{3n^2+1}+\sqrt{n^2+2n-1})}{5n^2-3n+2}$
- 25, $\lim \frac{\sqrt[3]{n^3+3n+1}-\sqrt{3n^2+4}}{3n-1}$
- 26, $\lim \frac{(5n^2+3n-1)(2n^2+6)}{(2n+1)^4-(3n-1)^4}$
- 27, $\lim \frac{\sqrt{n+2\sqrt{n}}(3n-1)}{n\sqrt{n}-2n+6}$
- 28, $\lim \frac{\sqrt{4n+1}(2n^2-4n+2)}{\sqrt{n^5+3n-1}}$
- 29, $\lim \frac{\sqrt{n^2-n+3}(4n-7)}{2n^2+4}$
- 30, $\lim \frac{\sqrt[3]{n^3+7}(\sqrt{4n^2-1}+2n-1)}{(3n-2)^2}$
- 31, $\lim \frac{2^n+3^n}{3^n+1}$
- 32, $\lim \frac{2^{n+1}+3^{n+1}}{2^n+3^n}$
- 33, $\lim \frac{(-2)^n+3^n}{(-2)^n-3^{n+1}}$
- 34, $\lim \frac{5^n-3^n}{5^{n+1}+3^{n+2}}$
- 35, $\lim (n^2-3n-10)$
- 36, $\lim (-n^3+4n-1)$
- 37, $\lim (-2n^4-3\sqrt{n}+1)$
- 38, $\lim (2n-\sqrt{n^3}+1)$
- 39, $\lim (\sqrt{n}-\sqrt[3]{n}+1)$
- 40, $\lim \frac{2n^2-n}{n+1}$
- 41, $\lim \frac{3n^2+3n-1}{2n^3-2n+1}$
- 42, $\lim \frac{(n-1)^2-\sqrt{n}}{3n+2}$
- 43, $\lim \frac{(2n-1)^3+n^3-2n+1}{2n^4+3n-2}$
- 44, $\lim \frac{(2n^2-1)^2-(n+1)^4}{(4n+3)^3}$
- 45, $\lim \frac{n\sqrt{n}+3n-1}{5n+7}$
- 46, $\lim (\sqrt{n^2+n+5}-n)$
- 47, $\lim (\sqrt{4n^2-3n+1}-2n)$
- 48, $\lim (\sqrt{n^2+2}-n)$
- 49, $\lim (\sqrt{n^2+2}-n)$
- 50, $\lim (\sqrt{n^2-3n+1}-2n)$
- 51, $\lim (\sqrt{n^2+4n+2}-n+2)$
- 52, $\lim (\sqrt{2n^2+1}-\sqrt{2n^2+n+1})$
- 53, $\lim \sqrt{n}(\sqrt{n+3}-\sqrt{n+1})$
- 54, $\lim \sqrt{n+5}(\sqrt{2n+3}-\sqrt{2n-1})$
- 55, $\lim \frac{1}{n+1-\sqrt{n^2+2}}$
- 56, $\lim \frac{\sqrt{2n+1}-\sqrt{n}}{\sqrt{2n-5}-\sqrt{n+2}}$
- 57, $\lim \frac{\sqrt{3n+2}(\sqrt{2n-1}-\sqrt{n-2})}{\sqrt{n}+3}$
- 58, $\lim (\sqrt[3]{n^3+2n^2+1}-n)$
- 59, $\lim (\sqrt{n^2+3n}+\sqrt[3]{n^3+n^2}-2n)$
- 60, $\lim (\sqrt[3]{n^3+3n^2+1}-\sqrt{n^2+2n})$