

55) $\lim_{x \rightarrow 1} \left(\frac{x^3 - x^2}{x^3 - 1} \right) = ?$ $\left[c : \frac{1}{3} \right]$

56) $\lim_{x \rightarrow 2} \left(\frac{2x^3 - 16}{x^2 - 4} \right) = ?$ $[c : 6]$

57) $\lim_{x \rightarrow 1} \left(\frac{5x^3 - 5}{4x^2 - 3x - 1} \right) = ?$ $[c : 2]$

58) $\lim_{x \rightarrow 2} \frac{3x^3 + 5x^2 - 12x - 20}{x^3 - 8} = ?$ $\left[c : \frac{11}{3} \right]$

59) $\lim_{x \rightarrow 0} \frac{x}{|x|} = ?$ $[c : \text{limit yoktur}]$

60) $\lim_{x \rightarrow 5} \frac{x^3 - 9x^2 + 20x}{x - 5} = ?$ $[c : 5]$

61) $\lim_{x \rightarrow a} \frac{ax^2 - (a^2 - 1) - a}{x - a} = ?$ $[c : a^2 + 1]$

62) $\lim_{x \rightarrow \frac{\pi}{4}} \cos 2x \cdot \operatorname{cosec} 4x = ?$ $[c : \frac{1}{2}]$

63) $\lim_{x \rightarrow \frac{\pi}{4}} \left(\frac{\cos x - \sin x}{1 - \tan x} \right) = ?$ $\left[c : \frac{\sqrt{2}}{2} \right]$

64) $\lim_{x \rightarrow \pi} \left(\frac{1 - \cos 2x}{\tan^2 x} \right) = ?$ $[c : 2]$

65) $\lim_{x \rightarrow 4} \left(\frac{16 - x^2}{3 - \sqrt{x^2 - 7}} \right) = ?$ $[c : 6]$

66) $\lim_{x \rightarrow \frac{\pi}{4}} (\cos 2x \cdot \operatorname{cosec} 4x) = ?$ $\left[c : \frac{1}{2} \right]$

67) $\lim_{x \rightarrow 1} \frac{\sqrt{x} - 1}{\sqrt[4]{x} - 1} = ?$ $[c : 2]$

68) $\lim_{a \rightarrow b} \frac{a\sqrt{a} - b\sqrt{b}}{\sqrt{a} - \sqrt{b}} = ?$ $[c : 3b]$

69) $\lim_{x \rightarrow 1} \frac{1 - \sqrt[3]{x}}{\sqrt{x} - 1} = ?$ $\left[c : \frac{-2}{3} \right]$

70) $\lim_{x \rightarrow 1} \frac{\sqrt[8]{x} - 1}{\sqrt{x} - 1} = ?$ $\left[c : \frac{1}{4} \right]$

71) $\lim_{x \rightarrow 1} \frac{\sqrt[3]{x} - 1}{3x - 3} = ?$ $\left[c : \frac{1}{9} \right]$

72) $\lim_{x \rightarrow 1} \left(\frac{2 \cdot \left(\frac{1}{x^4} - 1 \right)}{\frac{1}{x^8} - 1} \right) = ?$ $[c : 4]$

$\frac{\infty}{\infty}$ belirsizliği

73) $\lim_{x \rightarrow \infty} \frac{2x^3 - 1}{3x^3 + 1} = ?$ $\left[c : \frac{2}{3} \right]$

74) $\lim_{x \rightarrow \infty} \left(\frac{5x^3 - 7}{x^3 + 1} \right) = ?$ $[c : 5]$

75) $\lim_{x \rightarrow \infty} \frac{3x^2 - 5x}{7 - 4x^2} = ?$ $\left[c : \frac{-3}{4} \right]$

76) $\lim_{x \rightarrow \infty} \frac{4x^4 - 6x^6}{2x^6 + 3x^4} = ?$ $[c : -3]$

77) $\lim_{x \rightarrow \infty} \frac{4x^3 - 3x^2 + 2}{2n^2 - 2n^3} = ?$ $[c : -2]$

78) $\lim_{n \rightarrow \infty} \left(\log_2 \frac{2n^2 - 4n - 8}{32n^2 + 16 + 8} \right) = ?$ $[c : -4]$

79) $\lim_{x \rightarrow \infty} \frac{1 + 3 + 5 + \dots + (2n - 1)}{7n^2 + 1} = ?$ $\left[c : \frac{1}{7} \right]$

80) $\lim_{n \rightarrow \infty} \frac{3n^2 + 2n + 1}{1 + 2 + 3 + \dots + n} = ?$ $[c : 6]$

81) $\lim_{x \rightarrow \infty} \left(\frac{2n^2 + 3n - 1}{3n^2 + 2n + 5} - \frac{3}{5} \right) = ?$ $\left[c : \frac{1}{15} \right]$

82) $\lim_{x \rightarrow \infty} \frac{(a - 2) \cdot x^3 + (3b - 6) \cdot x^2 + x + 6}{bx^2 - 5x + 15} = 1$ olduğuna göre $a + b$ toplamı kaçtır? $[c : 5]$

83) $\lim_{n \rightarrow \infty} \frac{P(3n, 2)}{C(n, 2)} = ?$ $[c : 18]$

84) $\lim_{x \rightarrow \infty} \frac{26x - 25}{27x^2 - 26x + 25} = ?$ $[c : 0]$

85) $\lim_{x \rightarrow -\infty} \frac{1 - \frac{1}{x^3}}{x + \frac{1}{x}} = ?$ $[c : 0]$

86) $\lim_{x \rightarrow \infty} \left(\frac{4x + \sqrt{4x^2 + 1}}{2x + \sqrt{x^2 + 9}} \right) = ?$ $[c : 2]$

87) $\lim_{x \rightarrow -\infty} \frac{\sqrt{5x^2 - 17x + 4}}{4x - 7} = ?$ $\left[c : \frac{-\sqrt{5}}{4} \right]$

88) $\lim_{x \rightarrow -\infty} \frac{2 - \sqrt{4x^2 + 3x - 2}}{\sqrt[3]{x^3 + 3x^2 + 4x + 1} - 1} = ?$ $[c : 2]$

89) $\lim_{x \rightarrow -\infty} \frac{\sqrt{5x^2 - 17x + 4}}{4x - 7} = ?$ $\left[c : \frac{-\sqrt{5}}{4} \right]$

90) $\lim_{x \rightarrow \infty} \left(\frac{\sqrt{4x^2 + 3} + 3x - 2}{\sqrt{9x^2 + 5} + 2x} \right) = ?$ $[c : 1]$

91) $\lim_{x \rightarrow \infty} \frac{3x + 2 + \sqrt[3]{27x^3 - 5x}}{\sqrt{9x^2 - 4x - 1}} = ?$ $[c : 2]$

92) $\lim_{x \rightarrow \infty} \frac{5x - \sqrt{4x^2 + 1}}{2x + \sqrt{x^2 + 9}} = ?$ $[c : 1]$

$$93) \lim_{x \rightarrow \infty} \frac{\sqrt{x^2 + 5x + 6} + \sqrt{9x^2 + 5}}{5x - 21} = ? \quad \left[c: \frac{4}{5} \right]$$

$\infty - \infty$ belirsizliği

$$94) \lim_{x \rightarrow 3} \left(\frac{1}{x-3} - \frac{6}{x^2-9} \right) = ? \quad \left[c: \frac{1}{6} \right]$$

$$95) \lim_{x \rightarrow 1} \left(\frac{1}{x-1} - \frac{2}{x^2-1} \right) = ? \quad \left[c: \frac{1}{2} \right]$$

$$96) \lim_{x \rightarrow \infty} (\sqrt{x^2 + 6x} - x) = ? \quad [c: 3]$$

$$97) \lim_{x \rightarrow -\infty} (\sqrt{3x^2 + 3x} - \sqrt{3x^2 - 1}) = ? \quad \left[c: \frac{-\sqrt{3}}{2} \right]$$

$$98) \lim_{x \rightarrow \infty} (\sqrt{2x-3} - \sqrt{3x-4}) = ? \quad [c: -\infty]$$

$$99) \lim_{x \rightarrow \infty} (\sqrt{x^4 + 2} - \sqrt{x^4 - 2}) = ? \quad [c: 0]$$

$$00) \lim_{x \rightarrow \infty} (\sqrt{3x^2 + 3x} - \sqrt{3x^2 - 1}) = ? \quad [c: 0]$$

$$01) \lim_{x \rightarrow \infty} (x - \sqrt{x^2 + 3x + 1}) = ? \quad \left[c: \frac{-3}{2} \right]$$

$$02) \lim_{x \rightarrow -\infty} (\sqrt{x^2 + 6x + 2} - \sqrt{x^2 + 2x + 5}) = ? \quad [c: -2]$$

$$03) \lim_{x \rightarrow -\infty} (3x - 1 + \sqrt{9x^2 + x - 2}) = ? \quad \left[c: \frac{-7}{6} \right]$$

$$04) \lim_{x \rightarrow \infty} (\sqrt{x^2 + 2x} - \sqrt{x^2 + 3}) = ? \quad [c: 1]$$

$$05) \lim_{x \rightarrow \infty} (\sqrt{4x^2 - x + 3} - \sqrt{4x^2 + 5x - 7}) = ? \quad \left[c: \frac{-3}{2} \right]$$

$$06) \lim_{x \rightarrow -\infty} (\sqrt{2x^2 - x + 4} - \sqrt{5 + 2x^2}) = ? \quad \left[c: \frac{\sqrt{2}}{4} \right]$$

$$07) \lim_{x \rightarrow -\infty} (\sqrt{9x^2 - x + 5} + 3x) = ? \quad \left[c: \frac{1}{6} \right]$$

$$08) \lim_{x \rightarrow \infty} (x^2 - \sqrt{x^4 - x^2 + 1}) = ? \quad \left[c: \frac{1}{2} \right]$$

$$09) \lim_{x \rightarrow -\infty} (\sqrt{x^2 + 7x + 3} - \sqrt{x^2 + x + 5}) = ? \quad [c: -3]$$

$$10) \lim_{x \rightarrow -\infty} \sqrt{9x^2 + 18} - 3x = ? \quad [c: \infty]$$

$$11) \lim_{n \rightarrow \infty} \sqrt{4n^2 + n + 1} - 2n = ? \quad \left[c: \frac{1}{4} \right]$$

$$12) \lim_{x \rightarrow \infty} (2x + 1 - \sqrt{4x^2 - 4x + 1}) = ? \quad [c: 2]$$

$$13) \lim_{x \rightarrow \infty} \left[x^2 \cdot (\sqrt{x^4 + 2} - \sqrt{x^4 - 2}) \right] = ? \quad [c: 2]$$

$$14) \lim_{x \rightarrow \infty} (x - \sqrt{x^2 + 3x + 1}) = ? \quad \left[c: \frac{-3}{2} \right]$$

$$15) \lim_{x \rightarrow \infty} (\sqrt{x+3} - \sqrt{x-3}) = ? \quad [c: 0]$$

$$16) \lim_{x \rightarrow 1} \frac{x+2 - \sqrt{4x+5}}{x-1} = ? \quad \left[c: \frac{1}{3} \right]$$

$$17) \lim_{x \rightarrow 1} \left(\frac{\sqrt{2x+1} - \sqrt{x+2}}{\sqrt{x+3} - 2} \right) = ? \quad \left[c: \frac{2\sqrt{3}}{3} \right]$$

$$18) \lim_{x \rightarrow 3} \frac{2x+1 - \sqrt{3x-a}}{x-3} = ? \quad [c: -40]$$

$$19) \lim_{x \rightarrow 1} \frac{\sqrt{2x+1} - \sqrt{x+2}}{\sqrt{x+3} - 2} = ? \quad \left[c: \frac{2\sqrt{3}}{3} \right]$$

$$20) \lim_{x \rightarrow 4} \left(\frac{16 - x^2}{3 - \sqrt{x^2 - 7}} \right) = ? \quad [c: 6]$$

$$21) \lim_{x \rightarrow 3} \frac{x-3}{\sqrt{x^2 + 7} - 4} = ? \quad \left[c: \frac{4}{3} \right]$$

$$22) \lim_{x \rightarrow 3} \frac{2x+1 - \sqrt{3x-a}}{x-3} \text{ limitinin olması için } a \text{ değeri kaç olmalıdır?} \quad [-40]$$

$$23) p \in R \text{ olmak üzere } \lim_{x \rightarrow 2} \frac{\sqrt{x+a} - 4}{x-2} = p \text{ ise } a.p \text{ değeri kaçtır?} \quad \left[c: \frac{7}{4} \right]$$

Trigonometrik fonksiyonların limiti

$$24) \lim_{x \rightarrow 0} \frac{\sin 7x}{x} = ? \quad [c: 7]$$

$$25) \lim_{x \rightarrow 0} \frac{\sin 2x}{5x} = ? \quad \left[c: \frac{2}{5} \right]$$

$$26) \lim_{x \rightarrow 0} \frac{\sin 2x}{\sin 3x} = ? \quad \left[c: \frac{2}{3} \right]$$

$$27) \lim_{x \rightarrow 2} \frac{x^2 - 4}{\sin(x-2)} = ? \quad [c: 4]$$

$$28) \lim_{x \rightarrow 3} \frac{\sin(3-x)}{x^2 - 9} = ? \quad \left[c: \frac{-1}{6} \right]$$

$$29) \lim_{x \rightarrow 3} \frac{3x^2 - 27}{\sin(x-3)} = ? \quad [c: 18]$$

$$30) \lim_{x \rightarrow 3} \frac{\sin(3-x)}{x^2 - 9} = ? \quad \left[c: \frac{-1}{6} \right]$$

$$31) \lim_{x \rightarrow 0} \frac{\sin^3 x}{(x+1)^2} = ? \quad [c: 0]$$

$$32) \lim_{x \rightarrow 0} \frac{\sin^2 5x}{x^2 \cdot \cos x} = ? \quad [c: 25]$$

$$33) \lim_{x \rightarrow 2} \frac{\sin(3x-6)}{2x-4} = ? \quad \left[c: \frac{3}{2} \right]$$

$$34) \lim_{x \rightarrow 0} \left(\frac{2}{x} \cdot \sin \frac{x}{2} \right) = ? \quad [c: 1]$$

$$35) \lim_{x \rightarrow \infty} \left(x \cdot \sin \frac{3}{x} \right) = ? \quad [c: 3]$$

$$36) \lim_{x \rightarrow 1} \frac{\sin(x^2 - 1)}{x^3 - 1} = ? \quad \left[c: \frac{2}{3} \right]$$