

$$\lim_{n \rightarrow 2} \frac{r(r)+\delta}{r+1} = \frac{9}{5} = 2 \quad (\text{ا}) \quad \lim_{n \rightarrow 2} \left\{ \begin{array}{l} n \rightarrow 2^+ \Rightarrow \frac{r_n + \delta}{[0^+]^2} = \frac{r_n + \delta}{0} \quad (\text{ب}) \\ n \rightarrow 2^- \Rightarrow \frac{r_n + \delta}{[6^-]^2} = \frac{r_n + \delta}{0} \quad (\text{ج}) \end{array} \right.$$

$$\lim_{n \rightarrow 2^-} \varepsilon(r^-) - r = \varepsilon(2) - 2 = 4 \quad (\text{ا}) \quad \left[\lim_{n \rightarrow 2^-} \varepsilon(n-2) \right] = [10] = 10 \quad (\text{ج})$$

$$\lim_{n \rightarrow 2^-} [\varepsilon(r^-) - r] = [12 - 2] = [10] = 10 \quad (\text{ب}) \quad \left[\lim_{n \rightarrow 2^-} \varepsilon(n-2) \right] = [10] = 10 \quad (\text{د})$$

$$\lim_{n \rightarrow 2^-} \frac{r(r^-)+1}{r} = \frac{r(2)+1}{2} = \frac{5}{2} \quad (\text{ا}) \quad \left[\lim_{n \rightarrow 2^-} \frac{r_n+1}{r} \right] = [0] = 0 \quad (\text{ج})$$

$$\lim_{n \rightarrow 2^-} \left[\frac{r(r^-)+1}{r} \right] = \left[\frac{5}{2} \right] = [2] \quad (\text{ب}) \quad \left[\lim_{n \rightarrow 2^-} \frac{r_n+1}{r} \right] = [0] = 0 \quad (\text{د})$$

$$\frac{n-2}{(n-2)(n-1)} = \frac{1}{n-1} \Rightarrow \lim_{n \rightarrow 1} \frac{1}{n-1} \quad \left\{ \begin{array}{l} n \rightarrow 1^+ \Rightarrow \frac{1}{0^+} = +\infty \\ n \rightarrow 1^- \Rightarrow \frac{1}{0^-} = -\infty \end{array} \right. \quad (\text{ا})$$

$$\frac{n-2}{n^2-7n+4} = \frac{n-2}{(n-2)^2} \quad \left\{ \begin{array}{l} n \rightarrow 2^+ \Rightarrow \frac{-1^+}{0^+} = -\infty \\ n \rightarrow 2^- \Rightarrow \frac{-1^-}{0^-} = +\infty \end{array} \right. \quad (\text{ب})$$

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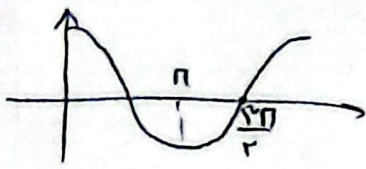
$$\lim \begin{cases} x \rightarrow r^+ \frac{x^2-1}{x^2-2} = \frac{x^2-2x+2}{x+2} = \frac{12}{2} = 6 \\ x \rightarrow r^- \frac{-x^2+1}{x^2-2} = \frac{-x^2+2x-2}{x+2} = \frac{-12}{2} = -6 \end{cases}$$

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$$\lim \begin{cases} x \rightarrow \pi^+ \frac{-\sin x}{\sin 2x} = \frac{1}{-2\cos x} = -\frac{1}{2} \\ x \rightarrow \pi^- \frac{\sin x}{\sin 2x} = \frac{1}{2\cos x} = \frac{1}{2} \end{cases}$$

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$$\lim \begin{cases} x \rightarrow (\frac{3\pi}{2})^+ \Rightarrow \sqrt{0^+} = 0 \\ x \rightarrow (\frac{3\pi}{2})^- \Rightarrow \sqrt{0^-} = 0 \end{cases}$$

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$$x \rightarrow 0^+ \Rightarrow \sin x \rightarrow 0^+ \Rightarrow [\sin x] = 0 \quad (-1)^{(0)} = 1 \Rightarrow \frac{1}{x^2 - x^2} = -\infty$$

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$$\lim \begin{cases} x \rightarrow r^+ \Rightarrow \frac{2 - [x^+]}{r - [x^+]} = 0 \\ x \rightarrow r^- \Rightarrow \frac{2 - [x^-]}{r - [x^-]} = 1 \end{cases}$$

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