

نام و نام خانوادگی: آریا غفیری... پاسخنانه تشریحی تکلیف شماره ۲۰... کلاس: دوازدهم... A

$$\lim_{n \rightarrow \infty} \frac{n^2 - 5}{n^2 + 9n + 7} = \frac{-5}{0^+} = -\infty \rightarrow \text{ریشه مخرج است} \rightarrow (n-2)^2 \rightarrow n^2 - 4n + 4 \rightarrow 9n + 7 = 0$$

و قیاس است

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$$\lim_{n \rightarrow \infty} \frac{n}{n + \sqrt{n}} = +\infty \rightarrow \frac{n^{\frac{1}{2}}}{0^+} \rightarrow \text{ریشه مخرج است} \rightarrow \frac{n^{\frac{1}{2}}}{+1} \rightarrow \text{ریشه قیاس}$$

$$(n - \sqrt{n})^2 = n^2 - 2n\sqrt{n} + n^{\frac{1}{2}} - \left[\frac{n^{\frac{1}{2}}}{-\sqrt{n}} \right] = \left[-\frac{n^{\frac{1}{2}}}{n^{\frac{1}{2}}} \right] = -1$$

مخرج بزرگتر است.

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$$\lim_{n \rightarrow \left(\frac{1}{\sqrt{3}}\right)^+} \frac{[-n] + a}{\sqrt{n^2 + 9n + 4}} = -\infty \rightarrow \frac{a-1}{\frac{1}{\sqrt{3}} + 9n + 4} \rightarrow \text{مخرج در صورت مثبت است}$$

$| \frac{1}{\sqrt{3}} + 9 | + 4 = 0 \rightarrow a = -\frac{1}{\sqrt{3}}$

$$\left[-\frac{1}{\sqrt{3}} \right] = -1$$

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$$\lim_{n \rightarrow \infty} \frac{[6n - \left(-\frac{5}{n^2}\right)]}{2n^2 + \left[\frac{5}{n^2}\right]} = \frac{-1 - [-1^-]}{-1^+ + [1^+]} = \frac{1}{0^+} = +\infty$$

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$$\lim_{n \rightarrow \infty} \frac{n^2 - 4}{n^2 + [n^2]} = \frac{0}{0} \rightarrow \frac{(n-2)(n+2)}{(n-2)(n^2 + 2n + 2)} = \frac{n+2}{(n^2 + 2n + 2)} = \frac{2}{2} = 1$$

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$$\lim_{n \rightarrow -1} \frac{n^{r+1} + 1}{1 + \sqrt[n]{n}} = \frac{0}{0} \xrightarrow{\text{hop}} \frac{r n^r + 1}{\frac{1}{\sqrt[n]{n}}} = -1^r$$

$$\lim_{n \rightarrow 0^-} \frac{\sqrt{r+n} - \sqrt{r-n}}{\sqrt{1+\cos}} = \frac{0}{0} \rightarrow \frac{(\sqrt{r+n} - \sqrt{r-n}) (\sqrt{r+n} + \sqrt{r-n})}{\sqrt{1-\cos} \times (\sqrt{r+n} + \sqrt{r-n})} = \frac{r}{\sqrt{r} \sin \frac{\pi}{2} \times \sqrt{r}} = -1$$

$$\lim_{n \rightarrow 0^-} \frac{r^n}{-\sqrt{r} \sin \frac{\pi}{2}} \times \lim_{n \rightarrow 0^-} \frac{1}{\sqrt{r+n} + \sqrt{r-n}} = \frac{-r^{\frac{1}{2}}}{r^{\frac{1}{2}}} = -1$$

$$\lim_{n \rightarrow 0} \frac{K + \cos(\sqrt{n})}{K n^r} = \frac{0}{0} \rightarrow \lim_{n \rightarrow 0} (K + \cos(\sqrt{n})) = 0 \rightarrow K + \cos(0) = 0 \rightarrow K = -1$$

$$\lim_{n \rightarrow 0} \frac{1 - \cos(\sqrt{n})}{n^r} = r \quad \frac{a n^r}{r n^r} = \frac{a}{r} = r \quad a = r \quad \frac{a}{r} = \frac{r}{-1} = -r$$

$$\lim_{n \rightarrow a^+} \frac{\sqrt{n-ra} + \sqrt{n-rb}}{\sqrt{n-ra}} = \frac{0}{0} \rightarrow \frac{\sqrt{n-ra}}{\sqrt{(n-ra)(n+ra)}} + \frac{\sqrt{n-rb}}{\sqrt{(n-ra)(n+ra)}} = \frac{r}{\sqrt{ra}} = \frac{\sqrt{ra}}{ra}$$

$$\lim_{n \rightarrow (-1)} \frac{1 - K[n]}{n^r - 1} = -\infty \quad \frac{1+K}{0^-} = 1+K > 1 \quad \frac{1+K}{0^+} = 1+K < 1 \rightarrow K < 0$$

$$-1(K < 0) \rightarrow -r(K) = -\frac{K}{r} \rightarrow \text{قسم لای}$$