

الف $\lim_{x \rightarrow 2^+} \frac{x+5}{x+1} = \frac{2(2)+5}{2+1} = 3$ ب $\lim_{x \rightarrow 2^-} \frac{x+5}{x+1} = \frac{2(2)+5}{2+1} = 3$

ج $\lim_{x \rightarrow 2} \frac{x+5}{x+1} = 3$

الف $\lim_{n \rightarrow \infty} \frac{1}{n^2} = 0$ ب $\lim_{n \rightarrow \infty} \frac{1}{n^2} = 0$

ج $\lim_{n \rightarrow \infty} \frac{1}{n^2} = 0$

الف $\lim_{x \rightarrow 2^+} \frac{x^2+1}{x} = \frac{2^2+1}{2} = \frac{5}{2}$ ب $\lim_{x \rightarrow 2^-} \frac{x^2+1}{x} = \frac{2^2+1}{2} = \frac{5}{2}$

ج $\lim_{x \rightarrow 2} \frac{x^2+1}{x} = \frac{5}{2}$

الف $\lim_{x \rightarrow 2^+} \frac{x-5}{x^2-4x+4} = \frac{2-5}{2^2-4(2)+4} = \frac{-3}{0} = -\infty$ ب $\lim_{x \rightarrow 2^-} \frac{x-5}{x^2-4x+4} = \frac{2-5}{2^2-4(2)+4} = \frac{-3}{0} = -\infty$

ج $\lim_{x \rightarrow 2} \frac{x-5}{x^2-4x+4} = -\infty$

الف $\lim_{x \rightarrow -2} [-3x] - [5x] = -3(-2) - [5(-2)] = 6 - [-10] = 6 + 10 = 16$ ب $\lim_{x \rightarrow -2} [-3x] - [5x] = -3(-2) - [5(-2)] = 6 - [-10] = 6 + 10 = 16$

ج $\lim_{x \rightarrow -2} [-3x] - [5x] = 16$

$\lim_{n \rightarrow 1} [\varepsilon n^2 - 3n\varepsilon + 2]$ مستقيم $12n^2 - 12n^2$ $12n^2(1-a)$ $\frac{0}{+1+0-}$
 $\alpha \rightarrow 1$
 $\begin{matrix} \nearrow + \\ \searrow - \end{matrix} \begin{matrix} [\varepsilon^-] = 3 \\ [\varepsilon^-] = 3 \end{matrix}$ نقطه
 $\lim_{n \rightarrow 0} [\varepsilon n^2 - 3n\varepsilon + 2]$ مستقيم $0+ [\mu^+] = 3$
 $\alpha \rightarrow 0$ نقطه $0- [\mu^-] = 2$

$\lim_{n \rightarrow 2} \frac{|n^2 - 1|}{n^2 - \varepsilon}$ HOP $\frac{3n^2}{2n^2} = \frac{3}{2}$ $3 > 2$
 $\alpha \rightarrow 2$ نقطه $\frac{-n^2 + 1}{n^2 - \varepsilon} = \frac{-3n^2}{2n^2} = -\frac{3}{2}$ $3 > -2$

$\lim_{n \rightarrow \pi} \frac{|\sin n|}{\sin \pi n}$ نقطه $\alpha \rightarrow \pi^+ \lim_{n \rightarrow \pi^+} \frac{-\cos n}{\sin \pi n} = \frac{-1}{\pi \cos \pi} = \frac{1}{\pi}$
 $\alpha \rightarrow \pi^- \lim_{n \rightarrow \pi^-} \frac{\cos n}{\sin \pi n} = \frac{1}{\pi \cos \pi} = -\frac{1}{\pi}$

$\lim_{n \rightarrow \frac{\pi}{2}} \sqrt{\cos n}$ نقطه $\alpha \rightarrow \frac{\pi}{2}^+ \sqrt{\cos \frac{\pi}{2}} = 0$
 $\alpha \rightarrow \frac{\pi}{2}^- \cos n < 0 \rightarrow$ تغير

$\lim_{n \rightarrow 0} \sqrt{n - 1.5n}$ نقطه $\alpha \rightarrow 0^+ \sqrt{(n-1)^2 - 1} \rightarrow ((\sqrt{n}-1)^2 - 1) < 0 \rightarrow (\sqrt{n}-1)^2 - 1 < 0$
 $\alpha \rightarrow 0^- \sqrt{n} \rightarrow n < 0 \rightarrow$ نقطه

$\lim_{n \rightarrow 0} \frac{(-1)^{[\sin n]}}{n^2 - n^2}$ نقطه $\frac{(-1)^0}{n^2 - n^2} = \frac{1}{n^2 - n^2} = \frac{1}{n^2(n-1)} \rightarrow \frac{0}{-1-1+}$
 $\alpha \rightarrow 0$ نقطه $\frac{1}{n^2} = -\infty$
 $\lim_{n \rightarrow 2} \frac{n^2 - [n^2]}{n - [n]}$ نقطه $\alpha \rightarrow 2^+ \frac{n^2 - \varepsilon}{n - 2} = n + 2 > \varepsilon$
 $\alpha \rightarrow 2^- \frac{n^2 - 3}{n - 1} = \frac{1}{1} = 1$

$y = 2n^2 - 3n\varepsilon + 2 = -3n^2 + 2n^2 + 2$ مستقيم $-12n^2 + 12n^2$
 $-12n^2(n^2 - 1)$ نقطه $\frac{-1}{-1+1+1-}$
 $y = n^2 - 3n^2 + 2$ مستقيم $\varepsilon n^2 - \varepsilon n^2 = \varepsilon n(n^2 - 1)$
 $\frac{-1}{-1+1+1-}$

