

$\lim_{x \rightarrow \infty} \frac{\sqrt{x^2 - Vx + \sqrt{V}}}{\sqrt{x^2 - \Lambda x + \sqrt{V}}} \xrightarrow{\text{Hop}} \frac{\Lambda x - V}{\Lambda x - \Lambda} \rightarrow \frac{1}{\sqrt{V}}$
(2) - 1

$\left. \begin{array}{l} \sqrt{x-1} \rightarrow -\sqrt{x+1} \\ \sqrt{x+1} \rightarrow \sqrt{x+1} \end{array} \right\} -\sqrt{x+1} - (\sqrt{x+1}) = \frac{-4\sqrt{x+1}}{2} = -2\sqrt{x+1}$
(2) - 2

$\frac{0}{0} \xrightarrow{\text{Hop}} \frac{1}{\frac{1}{\sqrt{x}}} \rightarrow \sqrt{x} \xrightarrow{\text{بایگن}} \sqrt{x} = \sqrt{V}$
(2) - 3

$\frac{0}{0} \xrightarrow{\text{Hop}} \frac{1 - \frac{V}{\sqrt{x}}}{\sqrt{x} - 1} \xrightarrow{\text{بایگن}} \frac{1 - \frac{1}{\sqrt{V}}}{\Lambda - 1} = \frac{1}{\sqrt{V}}$
(2) - 4

$\frac{0}{0} \xrightarrow{\text{Hop}} \frac{\frac{1}{\sqrt{x}}}{-1} \xrightarrow{\text{بایگن}} \frac{1}{\sqrt{x}} \rightarrow -\frac{1}{\sqrt{V}}$
(2) - 5

$\frac{0}{0} \xrightarrow{\text{Hop}} \frac{\sqrt{V}}{\sqrt{\sqrt{x+V}}} \xrightarrow{\text{بایگن}} \frac{\sqrt{V}}{\Lambda} \rightarrow \frac{\Lambda}{\sqrt{V}}$
(2) - 6

$\frac{0}{0} \xrightarrow{\text{Hop}} \frac{\sqrt{V} + \frac{1}{\sqrt{x}}}{\sqrt{\sqrt{x+V} + \sqrt{x}}} \xrightarrow{\text{بایگن}} \frac{\frac{V}{\sqrt{x}}}{\frac{1}{\sqrt{x}}} = \frac{V}{\Lambda}$
(2) - 7

$\lim_{x \rightarrow \pi} \frac{1 + \cos^3 x}{\sin^2 x} = \frac{(1 + \cos(x))(1 + \cos^2(x) - \cos(x))}{\sin^2(x)(1 + \cos(x))} = \frac{1 + \cos^2(x) - \cos(x)}{1 - \cos(x)}$

 $\xrightarrow{\text{بایگن}} \frac{1+1+1}{1+1} = \frac{3}{2}$
(2) - 8

$$\rightarrow \frac{1 - \frac{\sin(x)}{\cos(x)}}{\sin(x) - \cos(x)} = \frac{\cos - \sin}{\sin - \cos} = -\frac{1}{\cos(x)} \xrightarrow{\text{جاببئو}} -\frac{1}{\frac{\sqrt{2}}{2}} \rightarrow \left(-\frac{2}{\sqrt{2}}\right) = -\sqrt{2}$$

(2) - 9
با (-√2) ✓

$$\rightarrow \frac{\left(1 - \frac{1}{\cos^2}\right) - 1}{\cos^2 x} = \frac{-\frac{1}{\cos^2}}{2 \sin \cos} = -\frac{1}{2 \sin(x) \cos^2(x)} \xrightarrow{\text{جاببئو}} -\frac{1}{2 \times \frac{\sqrt{2}}{2} \times \left(\frac{\sqrt{2}}{2}\right)^2} = -\frac{1}{2 \times \frac{1}{2}} = -1$$

(2) - 10
نتیجہ