

1.-
$$\lim_{x \rightarrow \infty} \left(\frac{\sqrt{2x - \sqrt{x}}}{\sqrt{x - \sqrt{2x}}} \right)^{-x^2+5}$$

2.-
$$\lim_{x \rightarrow -5} \frac{x^3 - 3x^2 + 4}{x^4 - 5x^3 + 8x^2 - 4x}$$

3.-
$$\lim_{x \rightarrow 3} \frac{\sqrt{5x+1} - 4}{x^2 - 6x + 9}$$

4.-
$$\lim_{x \rightarrow \infty} \left(\frac{\sqrt{x^2 + 2x} - \sqrt{x^2 - 3}}{\sqrt{x^2 + 1}} \right)$$

5.-
$$\lim_{x \rightarrow \infty} \left(\frac{3x^2 + 3x - 5}{3x^2 + 2x - 4} \right)^{\frac{x^2-1}{x-1}}$$

6.-
$$\lim_{x \rightarrow 4} \left(\frac{x+6}{x^2-16} - \frac{x+1}{x^2-4x} \right)$$

7.-
$$\lim_{x \rightarrow \infty} \left[\frac{4x + 2\sqrt{16x^2 + x}}{\sqrt{x^2 + 1} - 3} \right]^{-x}$$

8.-
$$\lim_{x \rightarrow \infty} \left(\frac{2x^4 - x}{3 + 4x^4} \right)^{\frac{2}{x}}$$

9.-
$$\lim_{x \rightarrow 3} \frac{2\sqrt{2x+3} - 6}{18 - 2x^2}$$

10.
$$\lim_{x \rightarrow -1} \left(\frac{x^2 + 4x + 3}{x^2 + x} \right)^{\frac{2x+3}{x+1}}$$

11.-
$$\lim_{x \rightarrow \infty} \frac{\sqrt{2x+3} - \sqrt{4x+1}}{\sqrt{2x+1}}$$

12.
$$\lim_{x \rightarrow \infty} \left(\frac{\sqrt{2x - \sqrt{x}}}{\sqrt{x - \sqrt{2x}}} \right)^{-x^2+5}$$

13.
$$\lim_{x \rightarrow 3} \frac{9 - x^2}{\sqrt{x} - \sqrt{3}}$$

14.
$$\lim_{x \rightarrow 3} \left(\frac{4x}{x^2 - 9} - \frac{2x}{x^2 - 3x} \right)$$

15.
$$\lim_{x \rightarrow \infty} \left(\frac{2x^2 + x - 1}{5x^2 + 5x} \right)^{2x^2-1}$$

16.
$$\lim_{x \rightarrow \infty} \frac{(\sqrt{3+4x} - \sqrt{x})}{\sqrt{2x}}$$

17.
$$\lim_{x \rightarrow -5} \frac{x^3 + 15x + 9x^2 - 25}{x^3 + 10x^2 + 25x}$$

18.
$$\lim_{x \rightarrow 2} \left(\frac{x^2 - 5x + 6}{2 - x} \right)^{\frac{2x+1}{x-2}}$$

19.
$$\lim_{x \rightarrow 5} \frac{6 - 2\sqrt{x+4}}{x^3 - 6x^2 + 5x}$$

20.
$$\lim_{x \rightarrow -\infty} \frac{\sqrt{x^2 - 3} + 3x}{\sqrt{x^2 + 2}}$$

21.
$$\lim_{x \rightarrow -\infty} \left(4x + \sqrt{16x^2 + 2x} \right)$$

22.
$$\lim_{x \rightarrow \infty} \frac{x}{\sqrt{x^4 - 2x^3} - \sqrt{x^4 + 5x^2}}$$