

$$1. \lim_{x \rightarrow 4} \frac{2-\sqrt{2x-4}}{x^2-4x} =$$

$$2. \lim_{x \rightarrow 2} \frac{\sqrt{x+2}-\sqrt{2x}}{|x^2+5x-14|} =$$

$$3. \lim_{x \rightarrow \infty} \frac{1+2^{6x}+25^x}{32^x-4^{2x}} =$$

$$4. \lim_{x \rightarrow \infty} (2^{3x} + 5 \cdot 3^{2x} - 4^{x+1}) =$$

$$5. \lim_{x \rightarrow \infty} (\sqrt{x^2+3x} - \sqrt{x^2-3x}) =$$

$$6. \lim_{x \rightarrow -\infty} (\sqrt{x^2-1} - x + 1) =$$

$$7. \lim_{x \rightarrow 3} \left(\frac{1}{|x-3|} - \frac{6}{x^2-9} \right) =$$

$$8. \lim_{x \rightarrow 0} (1 + 2x^2)^{\frac{3}{x^3}} =$$

$$9. \lim_{x \rightarrow 0} (1 + 2|x|)^{\frac{2}{x^2}} =$$

$$10. \lim_{x \rightarrow 1} \frac{|3x-1|-|x^2-x-2|}{|x-1|-|x^2-1|}$$

$$11. \lim_{x \rightarrow \infty} \frac{|2x-1|-|x^2-x|}{|x-1|-|x^2-2|}$$

$$12. \lim_{x \rightarrow \infty} \frac{x+2|1-x|}{2x-|3+x|}$$

$$13. \lim_{x \rightarrow 1} \left(\frac{1}{|x-1|} - \frac{2}{1-x^2} \right)$$

נתונה הפונקציה: 14.

$$f(x) = \begin{cases} (1+x)^{\frac{2}{|x|}} & x > -1 \\ 0 & x = -1 \\ \frac{e^{-2x} - e^{-x+1}}{x+1} & x < -1 \end{cases}$$

א. חשבו $\lim_{x \rightarrow 0} f(x)$

ב. חשבו $\lim_{x \rightarrow -1} f(x)$