

# Limits of basic elementary functions

## Interactive tests

Robert Mařík

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Look at three or four or twenty my quizzes and  
then fill in my \_\_\_\_\_ please!



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**Kvíz.** Investigate graphs of basic elementary functions and find the correct answer.

$-\infty$

0

1

$\infty$

undefined

another answer

1.  $\lim_{x \rightarrow -\infty} \frac{1}{x}$

2.  $\lim_{x \rightarrow 0} \frac{1}{x}$

3.  $\lim_{x \rightarrow 0^+} \frac{1}{x}$

4.  $\lim_{x \rightarrow 1} \frac{1}{x}$

5.  $\lim_{x \rightarrow \infty} \frac{1}{x}$

6.  $\lim_{x \rightarrow 0^+} \sqrt{x}$

7.  $\lim_{x \rightarrow \infty} \sqrt{x}$



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$-\infty$

0

1

$\infty$

undefined

another answer

8.  $\lim_{x \rightarrow -\infty} x^2$

9.  $\lim_{x \rightarrow -1} x^2$

10.  $\lim_{x \rightarrow 0} x^2$

11.  $\lim_{x \rightarrow \infty} x^2$

$-\infty$

0

1

$\infty$

undefined

another answer

12.  $\lim_{x \rightarrow -\infty} x^3$

13.  $\lim_{x \rightarrow -1} x^3$

14.  $\lim_{x \rightarrow 0} x^3$

15.  $\lim_{x \rightarrow \infty} x^3$



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$-\infty$

0

1

$\infty$

undefined

another answer

16.  $\lim_{x \rightarrow -\infty} e^x$

17.  $\lim_{x \rightarrow 0} e^x$

18.  $\lim_{x \rightarrow 1} e^x$

19.  $\lim_{x \rightarrow \infty} e^x$

$-\infty$

0

1

$\infty$

undefined

another answer

20.  $\lim_{x \rightarrow 0^+} \ln x$

21.  $\lim_{x \rightarrow 1} \ln x$

22.  $\lim_{x \rightarrow e} \ln x$

23.  $\lim_{x \rightarrow \infty} \ln x$



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$-\infty$

0

1

$\infty$

undefined

another answer

24.  $\lim_{x \rightarrow -\infty} \cos x$

25.  $\lim_{x \rightarrow 0} \cos x$

26.  $\lim_{x \rightarrow \frac{\pi}{2}} \cos x$

27.  $\lim_{x \rightarrow \pi} \cos x$

28.  $\lim_{x \rightarrow \infty} \cos x$

$-\infty$

0

1

$\infty$

undefined

another answer

29.  $\lim_{x \rightarrow -\infty} \operatorname{atan} x$

30.  $\lim_{x \rightarrow 0} \operatorname{atan} x$

31.  $\lim_{x \rightarrow 1} \operatorname{atan} x$

32.  $\lim_{x \rightarrow +\infty} \operatorname{atan} x$



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