

L^AT_EX Beamer Tutorial

Functions, Limits and Derivatives

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Definition Of A Function

A **function** f is a rule that assigns each element x in a set D exactly one element, called $f(x)$, in a set E .

Set D is called the _____ of the function.

Set E is called the _____ of the function.

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Set D is called the **domain** of the function.

Set E is called the **range** of the function.

Your Very First Flash Card

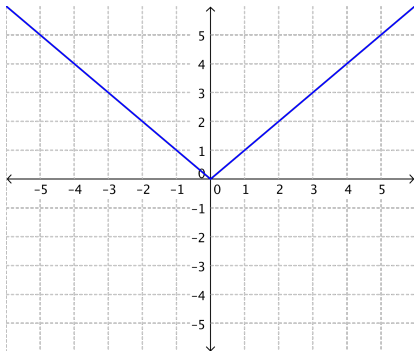
$$\sqrt{x^2} =$$

- a) x
- b) $-x$
- c) $|x|$
- d) undefined

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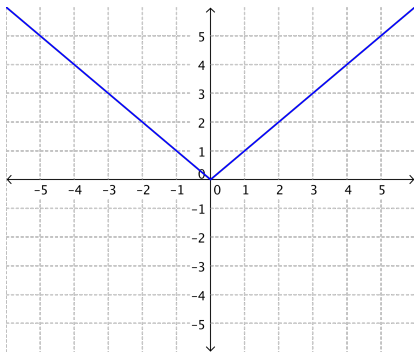


Your Very First Flash Card

$$\sqrt{x^2} = \begin{cases} -x, & x < 0 \\ x, & x \geq 0 \end{cases}$$

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- b) $-x$
- c) $|x|$
- d) undefined



Parent Functions

You should be able to identify by name and sketch a graph of each of the following parent functions:

1. $y = x$

2. $y = |x|$

3. $y = x^2$

4. $y = x^3$

5. $y = x^b$

6. $y = \sqrt{x}$

7. $y = \sqrt[3]{x}$

8. $y = \frac{1}{x}$

9. $y = 2^x$

10. $y = e^x$

11. $y = \ln(x)$

12. $y = \frac{1}{1+e^{-x}}$

13. $y = \sin(x)$

14. $y = \cos(x)$

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Thank You For Attending.

Contact Info:

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