Functions

Math 130 - Essentials of Calculus

4 September 2019

Defining a Function by Numerical Data

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1. Make a rough sketch of a function $N(t)$.
2. Use this graph to estimate the number of cell phone subscribers in 2001 and 2007.

Representations of Functions

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Piecewise Defined Functions

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Example

Consider the piecewise function

$$f(x) = \begin{cases} x + 2, & x < 0 \\ 1 - x, & x \geq 0 \end{cases}$$

Evaluate $f(-3)$, $f(0)$, *and* $f(2)$. *Sketch the graph of* $f(x)$.

Now You Try It!

Example

Consider the piecewise function

$$f(x) = \begin{cases} x+1, & x \leq -1 \\ x^2, & x > -1 \end{cases}$$

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3. $h(x) = \dfrac{\sqrt{x}}{x^2 - 3x + 2}$