

Cont'd Graphs

name	parent function	Graph	domain	range
1 constant	$f(x) = c$		Domain: $(-\infty, \infty)$	Range: $\{c\}$
2 linear	$f(x) = x$		Domain: $(-\infty, \infty)$	Range: $(-\infty, \infty)$
3 quadratic	$f(x) = x^2$		Domain: $(-\infty, \infty)$	Range: $[0, \infty)$
4 square root	$f(x) = \sqrt{x}$		Domain: $[0, \infty)$	Range: $[0, \infty)$
5 absolute value	$f(x) = x $		Domain: $(-\infty, \infty)$	Range: $[0, \infty)$
6 cubic	$f(x) = x^3$		Domain: $(-\infty, \infty)$	Range: $(-\infty, \infty)$
7 cube root	$f(x) = \sqrt[3]{x}$		Domain: $(-\infty, \infty)$	Range: $(-\infty, \infty)$
8 exponential of base e	$f(x) = e^x$		Domain: $(-\infty, \infty)$	Range: $(0, \infty)$
9 logarithm - n.c	$f(x) = \log x$		Domain: $(1, \infty)$	Range: $(-\infty, \infty)$
10 rational	$f(x) = \frac{1}{x}$		Domain: $(-\infty, 0) \cup (0, \infty)$	Range: $(-\infty, 0) \cup (0, \infty)$
11 circle	$x^2 + y^2 = r^2$		Domain: $(-r, r)$	Range: $(-r, r)$

Carlos Gredan

name	parent function	graph	domain	range
12 sine	$f(x) = \sin(x)$		Domain: $(-\infty, \infty)$	Range: $(-1, 1)$

13 cosine	$f(x) = \cos(x)$		Domain: $(-\infty, \infty)$	Range: $(-1, 1)$
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14 tangent	$f(x) = \tan x$ $= \frac{\sin(x)}{\cos(x)}$		Domain: $(-\infty, \infty)$ except $\tan x = \frac{\pi}{2} + n\pi$	Range: $(-\infty, \infty)$
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1 constant	$f(x) = c$		Domain: $(-\infty, \infty)$	Range: $\{c\}$

2 linear	$f(x) = x$		Domain: $(-\infty, \infty)$	Range: $(-\infty, \infty)$
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3 quadratic	$f(x) = x^2$		Domain: $(-\infty, \infty)$	Range: $[0, \infty)$
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4 square root	$f(x) = \sqrt{x}$		Domain: $[0, \infty)$	Range: $[0, \infty)$
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5 absolute value	$f(x) = x $		Domain: $(-\infty, \infty)$	Range: $[0, \infty)$
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6 cubic	$f(x) = x^3$		Domain: $(-\infty, \infty)$	Range: $(-\infty, \infty)$
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7 cube root	$f(x) = \sqrt[3]{x}$		Domain: $(-\infty, \infty)$	Range: $(-\infty, \infty)$
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8 exponential	$f(x) = e^x$ $f(x) = c^x$		Domain: $(-\infty, \infty)$	Range: $(0, \infty)$
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Carlos Gredner

name	parent function	graph	Domain Range
1 logarithmic	$f(x) = \log x$ or $f(x) = \ln x$		Domain: $(0, \infty)$ Range: $(-\infty, \infty)$

10 rational	$f(x) = \frac{1}{x}$		Domain: $(-\infty, 0) \cup (0, \infty)$ Range: $(-\infty, 0) \cup (0, \infty)$
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11 circle	$x^2 + y^2 = r^2$		Domain: $(-r, r)$ Range: $(-r, r)$
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12 sine	$f(x) = \sin(x)$		Domain: $(-\infty, \infty)$ Range: $(-1, 1)$
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13 cosine	$f(x) = \cos(x)$		Domain: $(-\infty, \infty)$ Range: $(-1, 1)$
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14 tangent	$f(x) = \tan(x)$ $= \frac{\sin(x)}{\cos(x)}$		Domain: $(-\infty, \infty)$ except for $x = \frac{\pi}{2} + k\pi$ Range: $(-\infty, \infty)$
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name	parent function	graph	Domain Range
constant	$f(x) = c$		Domain: $(-\infty, \infty)$ Range: $\{c\}$

1 Linear	$f(x) = x$		Domain: $(-\infty, \infty)$ Range: $(-\infty, \infty)$
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3 Quadrat. C	$f(x) = x^2$		Domain: $(-\infty, \infty)$ Range: $[0, \infty)$
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4 Square Root	$f(x) = \sqrt{x}$		Domain: $[0, \infty)$ Range: $[0, \infty)$
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5 absolute value	$f(x) = x $		Domain: $(-\infty, \infty)$ Range: $[0, \infty)$
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Carlos Greden

	Name	Parent function	Graph	Domain	Range
6	cubic	$f(x) = x^3$		Domain: $(-\infty, \infty)$	Range: $(-\infty, \infty)$
7	cube	$f(x) = \sqrt[3]{x}$		Domain: $(-\infty, \infty)$	Range: $(-\infty, \infty)$
8	exponential	$f(x) = e^x$ or $f(x) = x^e$		Domain: $(-\infty, \infty)$	Range: $(1, \infty)$
9	logarithmic	$f(x) = \log x$ or $f(x) = \ln x$		Domain: $(0, \infty)$	Range: $(-\infty, \infty)$
10	rational	$f(x) = \frac{1}{x}$		Domain: $(-\infty, 0) \cup (0, \infty)$	Range: $(-\infty, 0) \cup (0, \infty)$
11	circle	$x^2 + y^2 = r^2$		Domain: $(-r, r)$, $y \in (-r, r)$	Range: $(-r, r)$
12	sine	$f(x) = \sin(x)$		Domain: $(-\infty, \infty)$	Range: $[-1, 1]$
13	cosine	$f(x) = \cos(x)$		Domain: $(-\infty, \infty)$	Range: $[-1, 1]$
14	tangent	$f(x) = \tan(x)$ $= \frac{\sin(x)}{\cos(x)}$		Domain: $(-\infty, \infty)$ except for $x = \frac{\pi}{2} + k\pi$	Range: $(-\infty, \infty)$