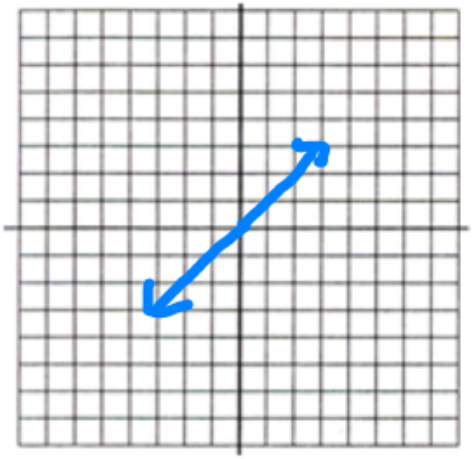


1. $f(x) = x$

Domain $(-\infty, \infty)$

Range $(-\infty, \infty)$

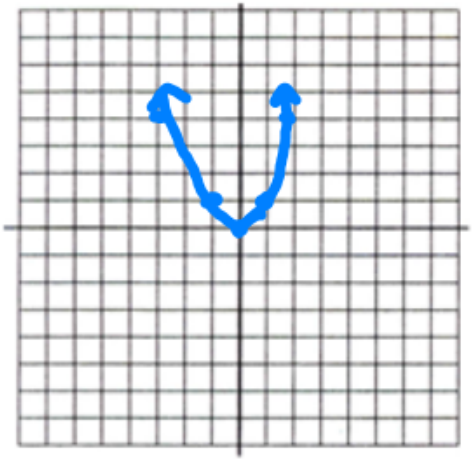
Roots $x = 0$

Symmetry origin

Even (Odd)

Periodic no

One-to-one yes



2. $f(x) = x^2$

Domain $(-\infty, \infty)$

Range $[0, \infty)$

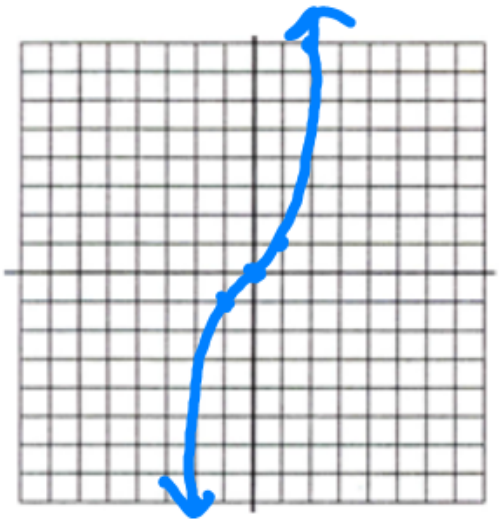
Roots $x = 0$

Symmetry y-axis

(Even) Odd

Periodic no

One-to-one no



3. $f(x) = x^3$

Domain $(-\infty, \infty)$

Range $(-\infty, \infty)$

Roots $x = 0$

Symmetry origin

Even, (Odd)

Periodic no

One-to-one yes

4. $f(x) = |x|$

Domain $(-\infty, \infty)$

Range $[0, \infty)$

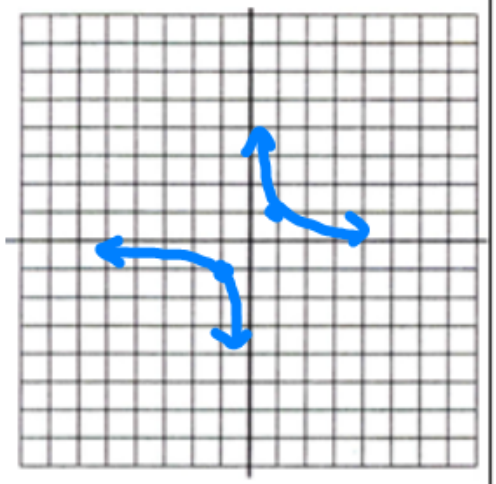
Roots $x = 0$

Symmetry y-axis

(Even) Odd

Periodic no

One-to-one no



5. $f(x) = \frac{1}{x}$

Domain $(-\infty, 0) \cup (0, \infty)$

Range $(-\infty, 0) \cup (0, \infty)$

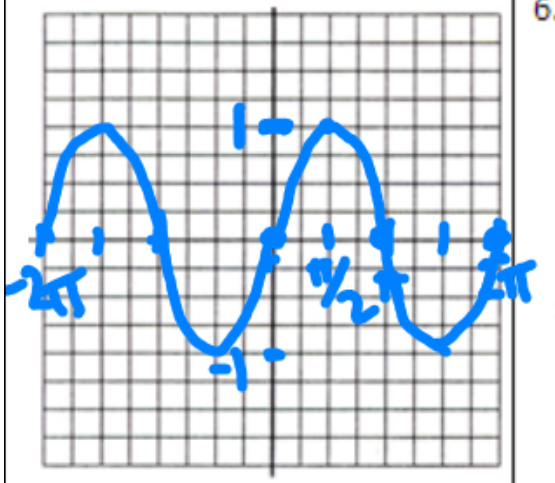
Roots none

Symmetry origin

Even / (Odd)

Periodic no

One-to-one yes



6. $f(x) = sinx$

Domain $(-\infty, \infty)$

Range $[-1, 1]$

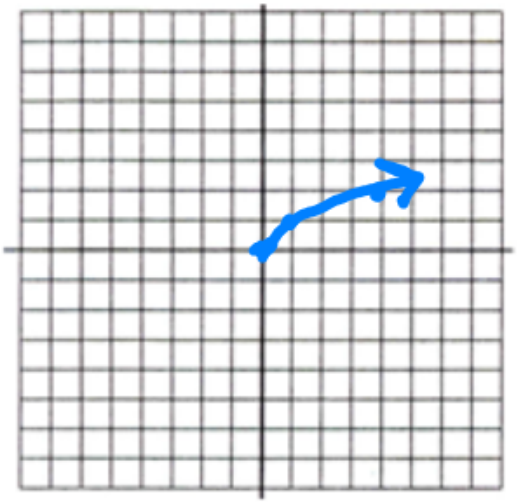
Roots $x = k\pi$, k is integer

Symmetry origin

Even / (Odd)

Periodic yes, 2π

One-to-one no



7. $f(x) = \sqrt{x}$

Domain [0, ∞)

Range [0, ∞)

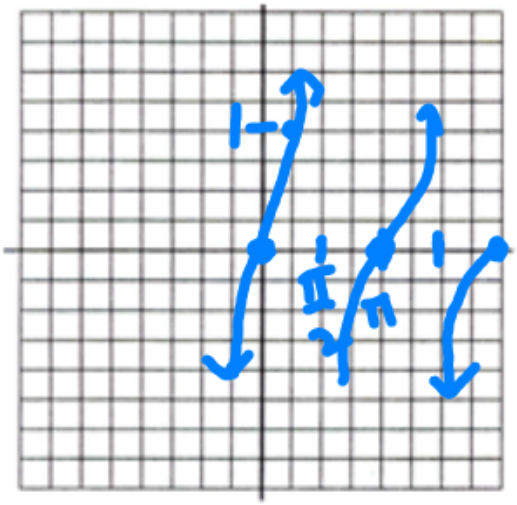
Roots x = 0

Symmetry no

Even/Odd neither

Periodic no

One-to-one yes



8. $f(x) = \tan x$

Domain $x \neq k \cdot \frac{\pi}{2}$, k is odd integer

Range (-∞, ∞)

Roots x = kπ, k is integer

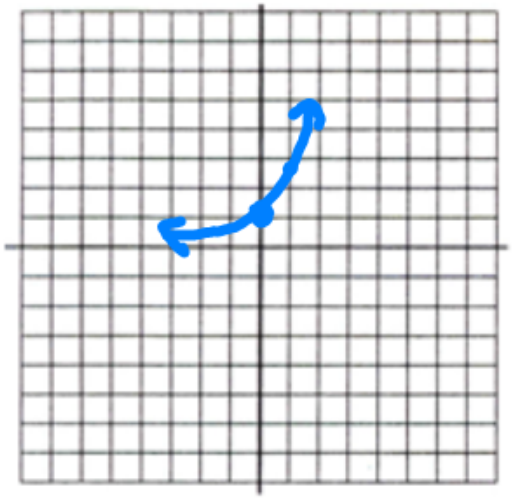
Symmetry origin

Even/Odd

Periodic π

One-to-one no

$x \neq \frac{\pi}{2} + k\pi$, k integer



9. $f(x) = e^x$

Domain (-∞, ∞)

Range (0, ∞)

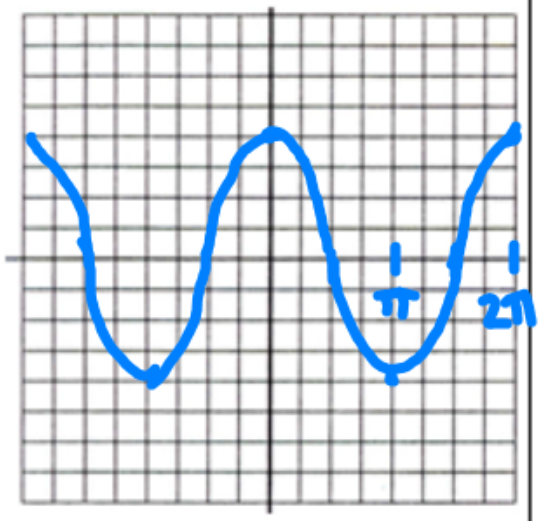
Roots none

Symmetry no

Even/Odd neither

Periodic no

One-to-one yes



10. $f(x) = cosx$

Domain (-∞, ∞)

Range [-1, 1]

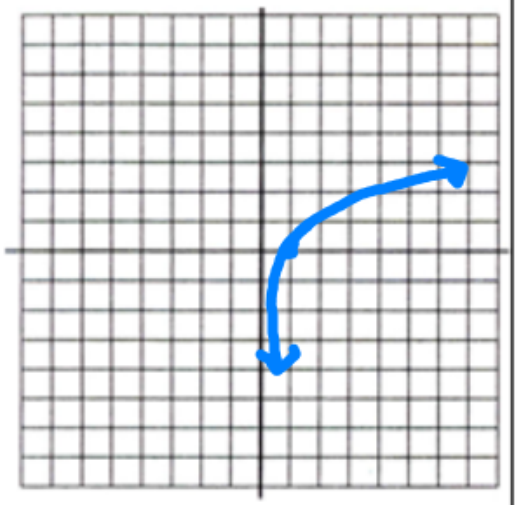
Roots $x = k \cdot \pi/2$, k is odd integer

Symmetry y-axis

Even/Odd

Periodic yes, 2π

One-to-one no



11. $f(x) = lnx$

Domain (0, ∞)

Range (−∞, ∞)

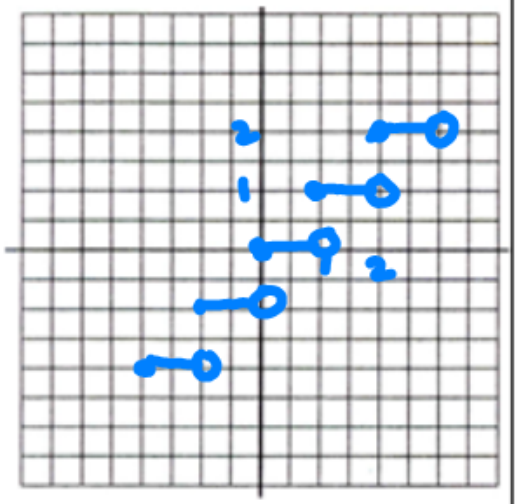
Roots x = 1

Symmetry none

Even/Odd neither

Periodic no

One-to-one yes



12. $f(x) = [x]$

Domain (−∞, ∞)

Range integers

Roots x = [0, 1) interval
↳ infinite #

Symmetry none

Even/Odd neither

Periodic no

One-to-one no