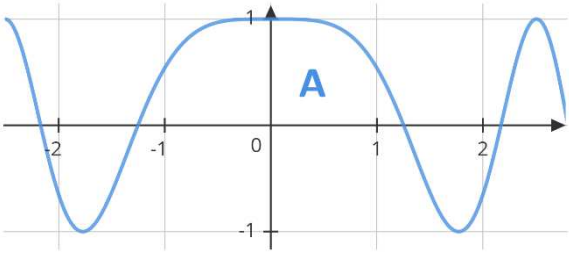
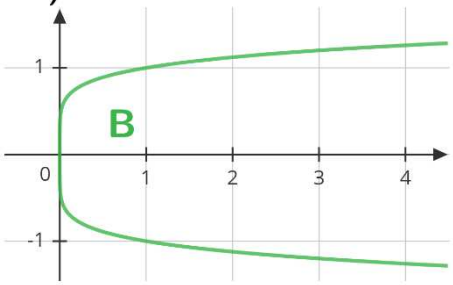
Vertical Line Test

Q1: Which of these graphs show a function?

1) A 2) B 3) Both 4) Neither





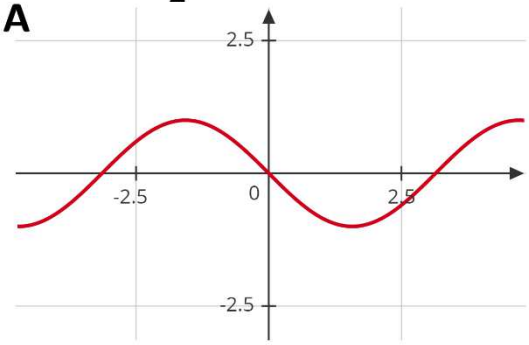
Q2: Is $y = \sqrt{x}$ a function?

Q3: Is $x = \sqrt{y}$ a function?

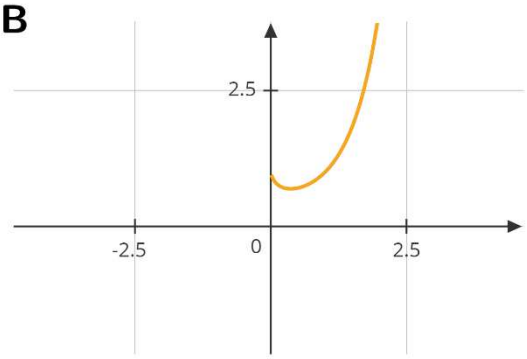
Q4: Match the following graphs to their equation and decide if they are functions:

1) $y=\frac{1}{2}^x$ 2) $y=-\sin(x)$ 3) $x^2 + y^4 = 9$ 4) $y = x^x$

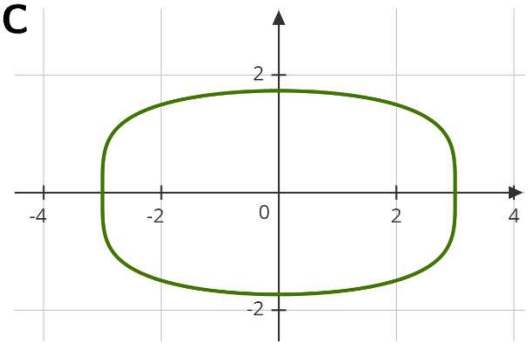
A



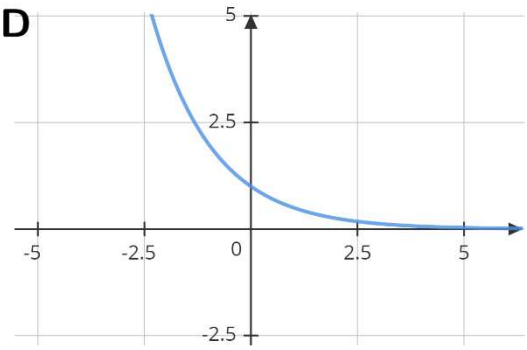
B



C



D



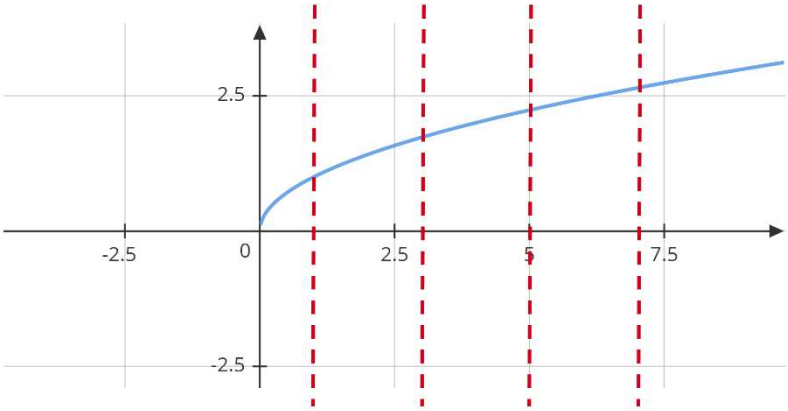
Q5: Is the following statement true or false?

Many-to-one relationships fail the vertical line test and are not functions.

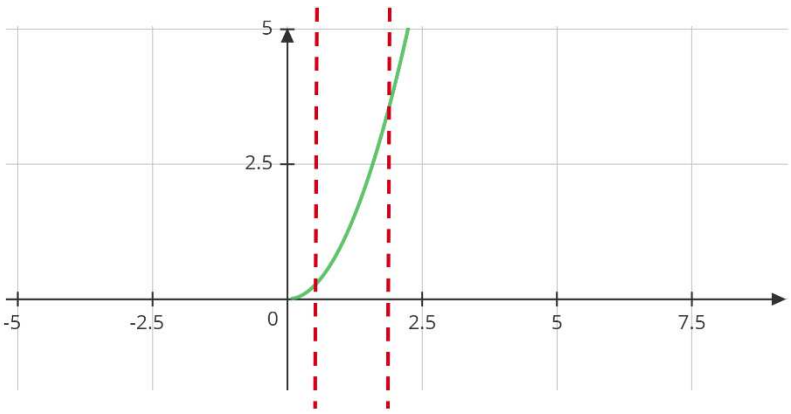
Vertical Line Test – Answers

Q1: Graph A passes the vertical line test and B fails, so only A is a function.

Q2: Yes – it passes the vertical line test.



Q3: Yes – it passes the vertical line test.



Q4: **A**=2, is a function. **B**=4, is a function. **C**=3, is not a function. **D**=1, is a function.

Q5: ***False***. **Many-to-one** and **one-to-one** relationships are both functions and pass the vertical line test.