



Quiz 1:

Q1) True or false

1) Composition is an operation on function (T)

2) $f(x) = x^2 + 2x$ then $f(2) = 10$ (F)

$$f(2) = (2)^2 + 2(2) = 4 + 4 = 8$$

3) The statement is correct for all real value of

x is $\sqrt{x^2} = x$ (F)

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

4) Domain $f(x) = x + 9$ is $(-\infty, +\infty)$ (T)

Q2) Choose the Correct answer :

1) function $f(x) = x^{20}$ is

a) even function

b) odd function

c) neither

2) $f(x) = \sqrt{16 - x^2}$ and $g(x) = \sqrt{x - 2}$ then $f \circ g =$

a) $\sqrt{18 - x}$

b) $18 + x^2$

c) $x - 18$

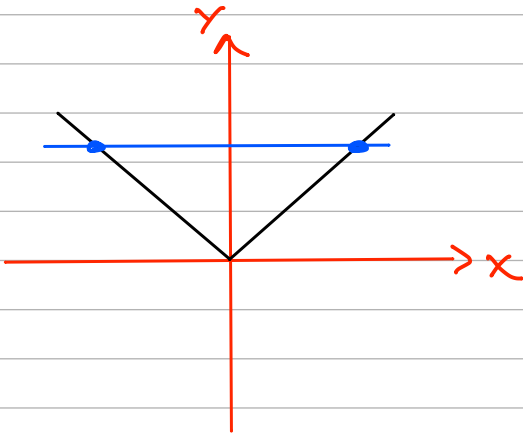
$$(f \circ g)(x) = f(g(x)) = f(\sqrt{x - 2})$$

$$= \sqrt{16 - (\sqrt{x - 2})^2}$$

$$= \sqrt{16 - x + 2} = \sqrt{18 - x}$$

Q3) Determine whether the function $f(x) = |x|$ is one to one

not one to one by horizontal line test



Q4) find the domain and range of $f(x) = \sqrt{x+1} + 4$

Domain

$$x+1 \geq 0$$

$$x \geq -1$$

$$D = [-1, +\infty)$$

Range:

$$x+1 \geq 0$$

$$\sqrt{x+1} \geq 0$$

$$\sqrt{x+1} + 4 \geq 4$$

$$R = [4, +\infty)$$