

Nustrive by Nowsheerwan

For Lectures/Tests/FLPs - Contact 03369374191

Functions Sol

1) C

2) B

3) B

4) A

5) D

6) $x^2 \geq 0 \rightarrow x^2 + 5 \geq 0 \rightarrow [5, \infty)$

7) Quadrant 1 and 3 $\rightarrow y \geq x$, Quadrant 2 and 4 $\rightarrow y \leq -x$

8) B

9) A

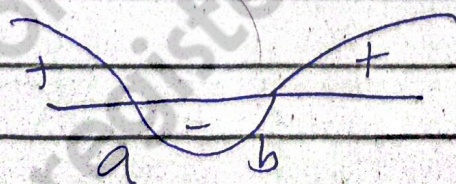
10) Inverse of Exponential $\rightarrow \log \rightarrow$ So A

11) Domain is $x \geq 1$, Range is $[0, \infty)$

12) ~~$\sqrt{x^2}$~~ $\sqrt{(-x)^2} \Rightarrow |-x| = x$

13) A

14) Wavy Curve



$a < x < b$

(5) $\frac{x}{x+1} \rightarrow$ Polynomial $\Rightarrow$ Rational
polynomial

(6) $\sin x \cdot \sin x \rightarrow (\sin x)^2 \rightarrow$ Even

(7) A

(8) B

(9) $y = x$

(20) $f^{-1}(f(x))$ or $f(f^{-1}(x)) = x \rightarrow A$

(21) D $\rightarrow$ odd fcn symmetric w.r.t origin

(22) $\sin x \cdot \cos x \rightarrow$ odd $\rightarrow B$

(23) ~~B~~ $(f^{-1})^{-1} f \rightarrow B$

$$24) B \rightarrow (f^{-1})^{-1} \Rightarrow f$$

$$25) y = \frac{2x^3 - 8}{3} \rightarrow \text{Interchange } x, y$$

$$x = \frac{2y^3 - 8}{3} \rightarrow \text{find } y \text{ from this eqn}$$

$$26) \left(-\infty, \frac{1}{4a} \right) \text{ where } D = b^2 - 4ac$$

$$27) A \rightarrow f(x) = a(x-p)(x-q), x, q \text{ beign roots}$$

$$28) C \rightarrow \text{Vertical line Test fail}$$

$$29) \frac{-b}{2a}$$

$$30) \frac{2(2)}{2(2)+1} \Rightarrow \left(\frac{4}{5} \right)^{-1} = \frac{5}{4}$$

$$31) D \rightarrow \text{Domain} = \text{Set } A$$

No rep in Domain

$$32) \text{ Back solve or } \otimes x^2 - 3x + 7 = 2x + 1$$

$$33) (x+1)^2 + 3(x+1) - 5$$

$$34) D$$

$$35) y=x \text{ is self inverse fthr } y=1x+0$$

~~or~~ or find inverse

$$y = ax + 1$$

$$x = ay + 1$$

$$\text{so } \frac{x-1}{a} = ay + 1$$

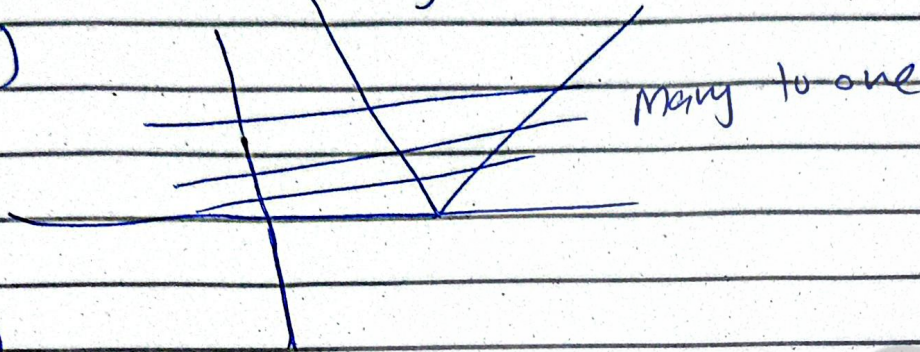
$$\Rightarrow \frac{x-1}{a} = y$$

then solve Equation

36) A

37) replace x with $\frac{x}{5}$

38)



39)

$$\left(\frac{-b}{2a}, \frac{-b^2}{4a} \right)$$

40) $A \rightarrow$ Bijective

41) $\left(-\frac{D}{4a}, \infty \right)$

42) $x \frac{3}{2} = 0 \rightarrow x = \frac{3}{2}$

43) $3 - 4x = 0 \rightarrow x = \frac{3}{4} \rightarrow$ Mod opened negative so $x < \frac{3}{4}$

44) $x - 1 = 0 \rightarrow x = 1 \rightarrow$ Mod opened +ve so $x > 1$

45) D

46) $3^2 + b(3) + c = 0 \rightarrow$ solve

$$4^2 + b(4) + c = 0$$

47) ~~given~~ $<$

48) $9 - x^2 \geq 0 \rightarrow x^2 - 9 \leq 0 \rightarrow$ many circle $[-3, 3]$

49) L

50) D

51) A

52)

NUS TRIVE
For online classes and lectures
register now at 0336 9374191