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Revision - Questions

Q) Ex The funct

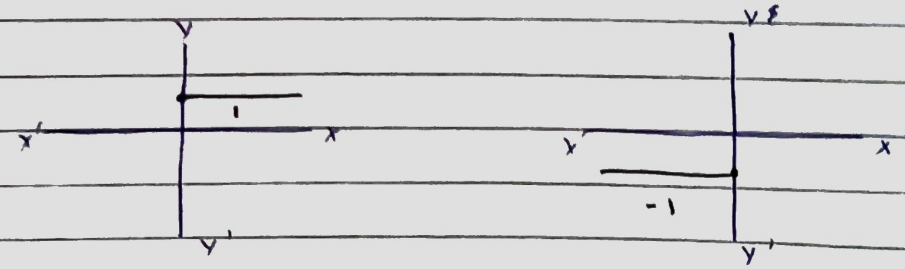
* Solutions

Ans) The function $f : R \to R$ defined by

$$f(x) = \begin{cases} 1 & x > 0 \\ 0 & x = 0 \\ -1 & x < 0 \end{cases}$$

↳ Domain : R

Range : $\{-1, 0, 1\}$



Ans) 3, 9, 5, 3, 12

$n = 12$ even

$\frac{12}{2} = 6^{th}$

↳ The $\frac{6^{th}}{2}$ of variations

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Ans 3 $R = \{(x, x+5) : x \in \{0,1,2,3,4,5\}\}$

$R = \{(0,5), (1,6), (2,7), (3,8), (4,9), (5,10)\}$

$\therefore$ Domain of R = $\{0,1,2,3,4,5\}$
Range of R = $\{5,6,7,8,9,10\}$

Ans 4 $y^2 = 4x + 4y$

$y^2 - 4y + 4 = 4x + 4$

$(y-2)^2 = 4(1)(x+1)$

- vertex of parabola : $x+1 = 0, y-2 = 0$
  $(-1, 2)$ is vertex.
- focus : $x + 1, a, y - 2 = 0$
  $\Rightarrow x = 0, y = 2$
  $\therefore (0, 2)$
- Axis : $x = 0$, $y - 2$, $\boxed{y = 2}$

LR = 4

Ans 5 $\frac{m_2 + nx_1}{m+n} = 0$

$\frac{m4 + n(-3)}{m+n} = 0$

$4m - 3m$

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$m : n = 3 : 4$ Ans