

Class: Ten

Subject- Opt. Mathematics

Source: photo of exercise are given below

Work: complete up to 9

Do your work neatly

6. Find the inverse functions of following functions.

(a) $f = \{(1, 5), (2, 6), (3, 7), (4, 8)\}$
 (b) $g = \{(a, 1), (b, 2), (c, 3), (d, 4)\}$

7. (a) In the figure, a function d is shown. Write down d^{-1} as a set of ordered pairs.
 (b) In the figure, a function f is shown. Write down f^{-1} as a set of ordered pairs.

8. (a) From the adjoining mapping diagram, find $g^{-1}\{3, 5\}$.
 (b) From the adjoining mapping diagram, find $i^{-1}\{3\}$.

SOLVE

- Find the inverse functions of following functions.

(a) $f = \{(x, y) : y = x \text{ and } x = \{1, 2, 3\}\}$ (b) $f = \{(x, y) : y = 2x + 1, x = \{0, 1, 2, 3\}\}$
- (a) If $f = \{(1, 2), (2, 3), (4, 5)\}$, find f^{-1} and the domain and range of f^{-1} .
 (b) If $f = \{(2, 4), (3, 6), (4, 8)\}$, find f^{-1} and the domain and range of f^{-1} .
- (a) If $f = \{(1, 5), (2, 4), (3, 6)\}$ and $f \circ g = \{(5, 6), (4, 5), (6, 4)\}$ then find g^{-1} .
 (b) If $f = \{(2, 3), (4, 5), (6, 7)\}$ and $g \circ f = \{(2, 4), (4, 6), (6, 8)\}$ then find g^{-1} .
- Find the inverse functions of following functions. [$x \in \mathbb{N}$]

(a) $f(x) = 2x + 3$ (b) $f(x) = 4x - 5$ (c) $f(x) = \frac{x+5}{3}$
 (d) $f(x) = \frac{x-3}{4}$ (e) $f: x \rightarrow \frac{2x+5}{6}$ (f) $g: x \rightarrow \frac{3x-5}{7}$
 (g) $f: x \rightarrow \frac{2x+3}{x-3}; x \neq 3$ (h) $g: x \rightarrow \frac{3x-5}{x+2}$ (i) $f: x \rightarrow \frac{4x+7}{5x+3}$
- (a) If $f(x) = \frac{x-5}{4}$ and $f^{-1}(x) = 25$, find the value of x .
 (b) If $f(x) = 2x - a$ and $f^{-1}(2) = 2$, find the value of a .
- (a) If $f(x) = 8 - 3x$, evaluate $f^{-1}(-4)$ and $ff(2)$.
 (b) If $f(x) = 4x - 2$ and $g(x) = \frac{1}{x}$, find the value of $f^{-1}(6)$ and $g \circ f(2)$.
- (a) If $f(4x + 5) = 12x + 18$ then find $f^{-1}(x)$.
 (b) If $f(x + 3) = 3x + 5$ then find $f^{-1}(x)$.
- (a) If $f(x) = 2x + 7$, find $f(x + 2)$ and $f^{-1}(x + 2)$.
 (b) If $f(x) = 4 - 3x$, evaluate $f^{-1}(-8)$ and $f \circ f^{-1}(2)$.
- (a) If $f(x) = 2x + 1$, $g(x) = \frac{x-5}{2}$ then find the value of $f^{-1}g^{-1}(3)$.
 (b) If $f(x) = 4x + 5$ and $g(x) = 5x - 4$, find the value of $f^{-1} \circ g^{-1}(1)$.



Subject- English

Unit 5 E book

Pg 51 and 52 ex 1 and 2

Subject- Social Studies

1. Summarize the central agenda set by the sustainable Development Goals for 2016 AD to 2930 AD.

Subject- Science

1. Why is modern periodic table superior to Mendeleev periodic table? Write in four points.
2. Between Na and K, which one is more reactive and why?
3. What happens in atomic size of elements in a period from left to right and why?
4. Write any three differences between period and group of modern periodic table.

The End.