

XI-WORKSHEET

CH-2 RELATION AND FUNCTIONS

1. If $f(x + 1) = x^2 + 1$, then $f(x) =$
a) $x^2 - 2x + 1$ b) $x^2 - 2x + 2$ c) $(x + 1)^2 + 1$ d) None
2. Let $f(x) = \sqrt{9 - x^2}$, then $\text{dom}(f) =$
a) $[-3, 3]$ b) $(-\infty, -3]$ c) $(-\infty, -3] \cup [4, \infty)$ d) $[3, \infty)$
3. Let $f(x) = \frac{x}{(x^2-1)}$, then $\text{dom}(f) =$
a) R b) $R - \{1\}$ c) $R - \{-1\}$ d) $R - \{-1, 1\}$
4. Range of the function $f(x) = |x - 1|$ is:
a) $(-\infty, 0)$ b) $[0, \infty)$ c) R d) None
5. Domain of $\sqrt{a^2 - x^2}$, ($a > 0$) is:
a) $(-a, a)$ b) $R - (-a, a)$ c) $[0, a]$ d) $(-a, 0)$
6. The domain and range of the real function f defined by $f(x) = \sqrt{x - 1}$ is given by
a) Domain = $(1, \infty)$, range = $[0, \infty)$
b) Domain = $(1, \infty)$, range = $(0, \infty)$
c) Domain = $[1, \infty]$, range = $[0, \infty)$
d) Domain = $[1, \infty)$, range = $(0, \infty)$
7. The domain of the function $\frac{x^2}{x^2-5x+6}$ is:
a) R b) $R - \{2, 3\}$ c) $(2, 3)$ d) $R - (0, 1, 3)$

MATHS ACADEMY-BY PRACHI MA'AM
9327070815, 9824588047

8. Given the function $f(x) = (2x + 3)$, then the value of $f(2x) - 2f(x) + 3$ will be:
a) 3 b) 2 c) 1 d) 0
9. If $f: A \rightarrow R$ is a real valued function defined by $f(x) = \frac{1}{x}$, then $A =$
a) R b) $R - \{1\}$ c) $R - \{0\}$ d) $R - N$
10. $f(x) = 3x + x^7$ is
a) An even function
b) An odd function
c) A linear function
d) A quadratic function
11. What is domain of a function?
12. What is range of a function?
13. What is co-domain of a function?
14. What is a constant function?