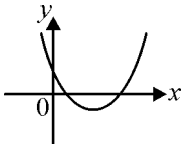
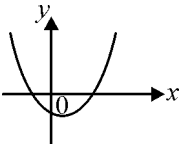
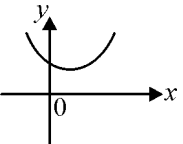
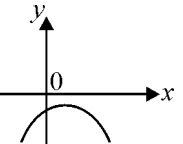


Date Planned : __ / __ / __	Daily Tutorial Sheet - 8	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level - 2	Exact Duration : _____

96. If the roots of $x^2 + x + a = 0$ exceed a , then: ▶
(A) $2 < a < 3$ **(B)** $a > 3$ **(C)** $-3 < a < 3$ **(D)** $a < -2$
97. The value of 'p' for which both the roots of the equation $4x^2 - 20px + (25p^2 + 15p - 66) = 0$ are less than 2 lies in: ▶
(A) $\left(\frac{4}{5}, 2\right)$ **(B)** $\left(-1, \frac{-4}{5}\right)$ **(C)** $(2, \infty)$ **(D)** $(-\infty, -1)$
98. If the roots of $x^2 - (a-3)x + a = 0$ are such that both of them are greater than 2, then: ▶
(A) $a \in [7, 9]$ **(B)** $a \in [7, \infty)$ **(C)** $a \in [9, 10]$ **(D)** $[7, 9]$
99. The set of values of m for which the roots of the equation $x^2 - (m+1)x + m + 4 = 0$ are real and negative consists of all m such that: ▶
(A) $-3 < m \leq -1$ **(B)** $-4 < m \leq -3$ **(C)** $-3 \leq m \leq 5$ **(D)** $-3 \geq m$ or $m \geq 5$
100. The equation $x^2 + ax + b^2 = 0$ has two roots each of which exceeds a number c, then: ▶
(A) $a^2 < 4b^2$ **(B)** $c^2 + ac + b^2 > 0$ **(C)** $\frac{-a}{2} < c$ **(D)** None of these
101. The real values of a for which the quadratic equation $2x^2 - (a^3 + 8a - 1)x + a^2 - 4a = 0$ possesses roots of opposite signs are given by: ▶
(A) $a > 5$ **(B)** $0 < a < 4$ **(C)** $a > 0$ **(D)** $a > 7$
102. If both the roots of the equation $x^2 - 6ax + 2 - 2a + 9a^2 = 0$ exceed 3, then:
(A) $\frac{9}{11} < a < \frac{11}{9}$ **(B)** $a = \frac{11}{9}$ **(C)** $a > \frac{11}{9}$ **(D)** $a < \frac{11}{9}$
103. If $b > a$, then equation $(x-a)(x-b) - 1 = 0$ has :
(A) both roots in $[a, b]$ **(B)** both roots in $(-\infty, a)$
(C) both roots in (b, ∞) **(D)** one root in $(-\infty, a)$ and other in (b, ∞)
104. Which of the following graphs represents the expression $f(x) = ax^2 + bx + c$ ($a \neq 0$) when $a > 0$, $b < 0$ and $c < 0$?
(A)  **(B)**  **(C)**  **(D)** 
105. If α, β are the roots of the equation $(x-a)(x-b) = c$, $c \neq 0$, then the roots of the equation $(x-\alpha)(x-\beta) + c = 0$ are ;
(A) a, c **(B)** b, c **(C)** a, b **(D)** $a + c, b + c$