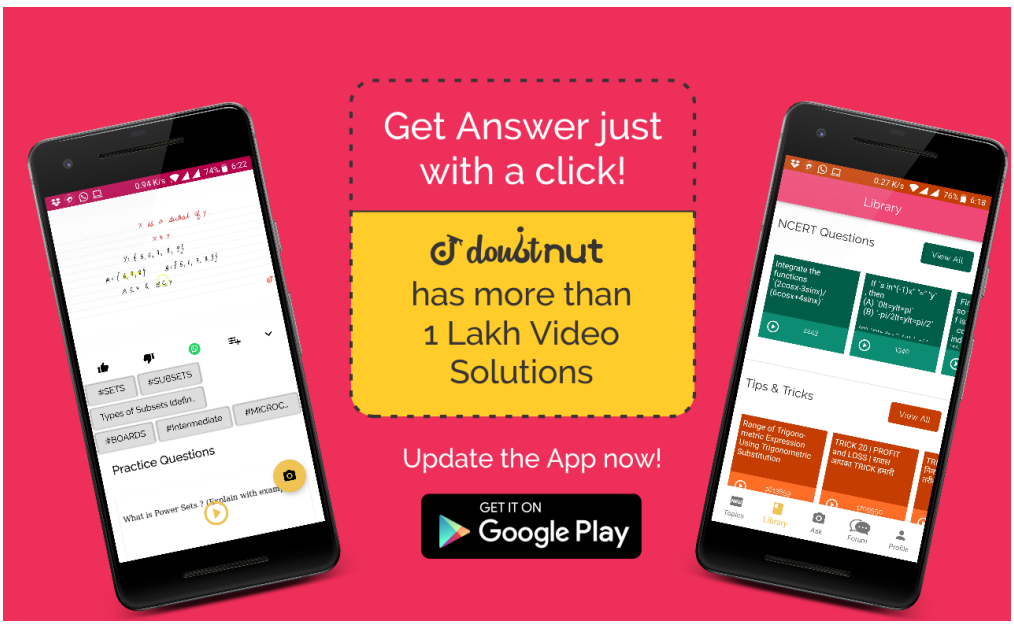
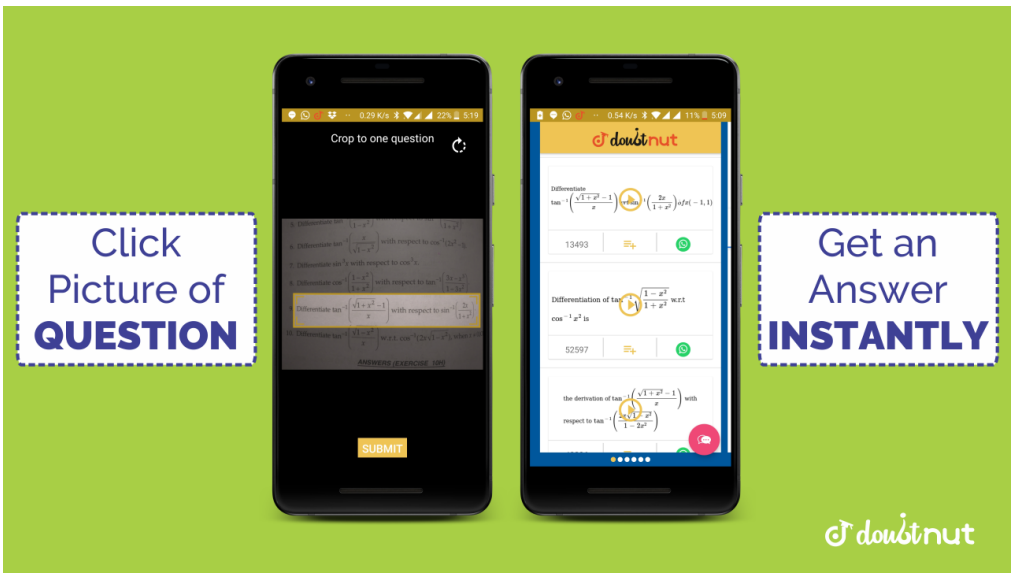
JEE ADVANCED SUPER 25 REVISION SERIES

QUADRATIC EQUATIONS

Ques No.	Question
1 - 17212	**JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS** If P(x) is a polynomial with integer coefficients such that for 4 distinct integers $a, b, c, d, P(a) = P(b) = P(c) = P(d) = 3$, if $P(e) = 5$, (e is an integer) then Watch Free Video Solution on Doubtnut
2 - 28413	**JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS** The value of expression $x^4 - 8x^3 + 18x^2 - 8x + 2$ when $x = 2 + \sqrt{3}$ a. 2 b. 1 c. 0 d. 3 Watch Free Video Solution on Doubtnut
3 - 28419	**JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS** If p, q, r, s are rational numbers and the roots of $f(x) = 0$ are eccentricities of a parabola and a rectangular hyperbola, where $f(x) = px^3 + qx^2 + rx + s$,then $p + q + r + s =$ a. p b. $-p$ c. $2p$ d. 0 Watch Free Video Solution on Doubtnut
	
4 - 28431	**JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS** The set of values of a for which $ax^2 + (a-2)x - 2$ is negative for exactly two integral x, is $(0, 2)$ b. $[1, 2)$ c. $(1, 2]$ d. $(0, 2]$ Watch Free Video Solution on Doubtnut

5 - 28592	**JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS** For real x, the function $\frac{(x-a)(x-b)}{x-c}$ will assume all real values provided a)$a>b>c$ b) $a<b<c$ c) $a>c<b$ d) $a \leq c \leq b$ Watch Free Video Solution on Doubtnut
6 - 28598	**JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS** Let α and β be the roots $x^2-6x-2=0,$ with $\alpha>\beta$ If $a_n-\beta^n$ for or $n \geq 1$ then the value of $\frac{a_{10}-2a_8}{2a_9}$ is (a) 1 (b) 2 (c) 3 (d) 4 Watch Free Video Solution on Doubtnut
7 - 28607	**JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS** If the roots of the quadratic equation $\left(4p-p^2-5\right)x^2-(2p-1)x+3p=0$ lie on either side of unit, then the number of interval values of p is 1 b. 2 c. 3 d. 4 Watch Free Video Solution on Doubtnut
	
8 - 28628	**JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS** Consider the equation $x^2+2x-n=0$ where $n \in N$ and $n \in [5,100]$ The total number of different values of n so that the given equation has integral roots is a.8 b. 3 c. 6 d. 4 Watch Free Video Solution on Doubtnut
9 - 28977	**JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS** The number of points of intersection of two curves $y=2\sin x and y=5x^2+2x+3 is$ 0 b. 1 c. 2 d. ∞ Watch Free Video Solution on Doubtnut
10 - 29059	**JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS** The number of integral values of a for which the quadratic equation $(x+a)(x+1991)+1=0$ has integral roots are a. 3 b.0 c.1 d. 2

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11 - 29362

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

If the equation $x^2 = ax + b = 0$ has distinct real roots and $x^2 + a|x| + b = 0$ has only one real root, then which of the following is true? $b = 0, a > 0$ b. $b = 0, a < 0$ c. $b > 0, a < 0$ d. $b\langle 0, a\rangle 0$

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12 - 29366

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

Let x, y, z, t be real numbers $x^2 + y^2 = 9, z^2 + t^2 = 4$, and $xt - yz = 6$ Then the greatest value of $P = xz$ is a. 2 b. 3 c. 4 d. 6

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13 - 29368

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

If $\left(b^2 - 4ac\right)^2\left(1 + 4a^2\right) < 64a^2, a < 0$, then maximum value of quadratic expression $ax^2 + bx + c$ is always less than a. 0 b. 2 c. -1 d. -2

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14 - 29391

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

The number of distinct real roots of $x^4 - 4x^3 + 12x^2 + x - 1 = 0 is\_\ \_\ \_$.

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15 - 38952

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

α, β be the roots of the equation $x^2 - px + r = 0$ and $\frac{\alpha}{2}, 2\beta$ be the roots of the equation $x^2 - qx + r = 0$ then value of r is

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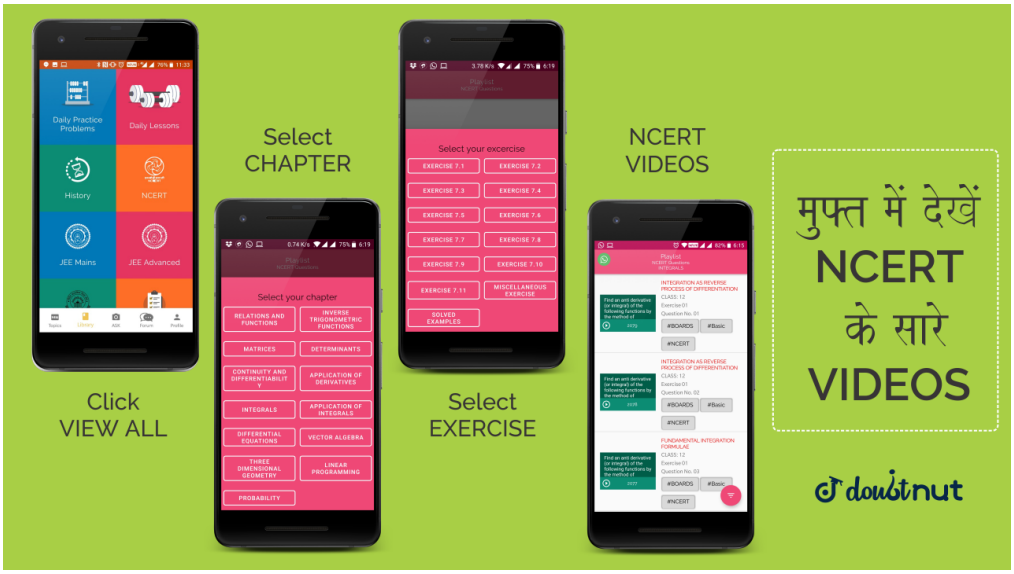

16 - 38954

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both roots of the equation $(x-a)(x-b)+(x-b)(x-c)+(x-c)(x-a)=0$ are

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17 - 39347

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

Find the set of all values of a for which the roots of the equation $x^2-2ax+a^2+a-3=0$ are less than 3,

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18 - 41851

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

The value of b for which the equation $x^2+bx-1=0$ and $x^2+x+b=0$ have one root in common is (a) $-\sqrt{2}$ (b) $-i\sqrt{3}$ (c) $i\sqrt{5}$ (d) $\sqrt{2}$

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19 - 41909

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

If $a^2+b^2+c^2=1$ then $ab+bc+ca$ lies in the interval

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20 - 42133

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

Let S be the set of all non-zero numbers αsuch that the quadratic equation $\alpha x^2 - x + \alpha = 0$has two distinct real roots $x_1,\ \text{and}\ x_2$ satisfying the inequality $|x_1 - x_2| < 1$ which of the following intervals is(are) a subset of S?

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21 - 51534

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Let $a > 0, b > 0$ and $c > 0$. Then, both the roots of the equation $ax^2 + bx + c = 0$. (1979, 1M) are real and negative have negative real parts have positive real parts None of the above

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22 - 51693

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

For the equation $3x^2 + px + 3 = 0, p > 0,$ if one of the root is square of the other, then p is equal to $\frac{1}{3}$ (b) 1 (c) 3 (d) $\frac{2}{3}$

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23 - 54263

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

Let a, b, c, p, q be the real numbers. Suppose α, β are the roots of the equation $x^2 + 2px + q = 0$. and $\alpha, \frac{1}{\beta}$ are the roots of the equation $ax^2 + 2bx + c = 0$, where $\beta \notin \{-1, 0, 1\}$. Statement I $(p^2 - q)(b^2 - ac) \geq 0$ Statement 11 $b \notin pa$ or $c \notin qa$.

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24 - 76680

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

The number of integral values of x satisfying $\sqrt{-x^2+10x-16}$

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25 - 77899

JEE ADVANCED SUPER 25 REVISION SERIES - QUADRATIC EQUATIONS

Number of integral values of a for which the equation $x^2-(a+1)x+a-1=0$, has integral roots, is equal to -

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