

Quadratic Equation

JPP 1



$$\alpha + \beta = -\frac{b}{a}$$



$$\alpha\beta = \frac{c}{a}$$



$$|\alpha - \beta| = \frac{\sqrt{D}}{|a|}$$



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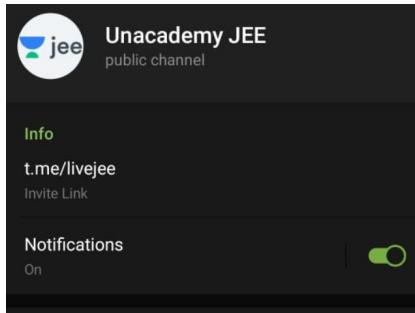
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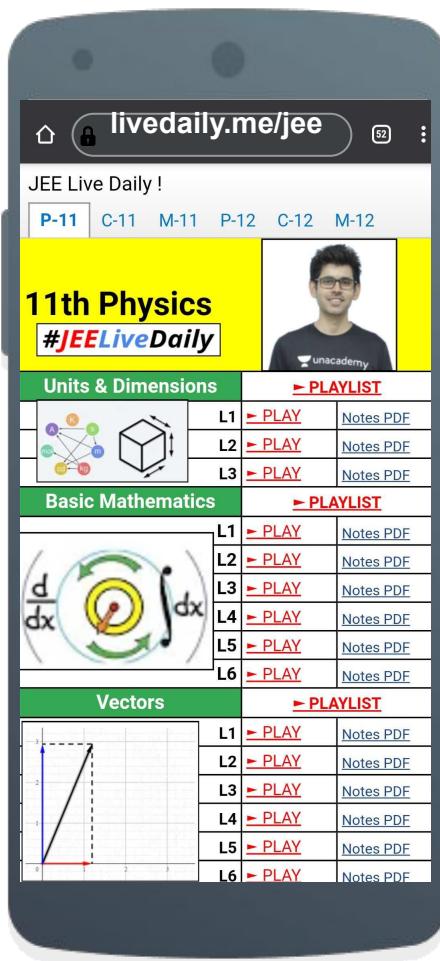
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 $9\sqrt{3}$ m/s. At the same instant, on the shell is fired, find v.
 (Take g = 10 m/s²)

Self Inductance

As 'I' changes, 'Φ' changes and emf is induced
 this emf is called **'Self-induced emf'**
 as emf is induced because of **'Φ' of loop itself.**

Corresponding induced emf

$$\epsilon = -L \frac{di}{dt}$$

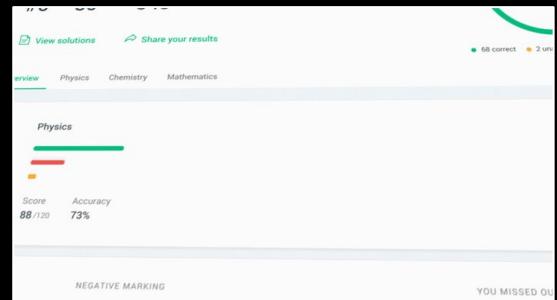
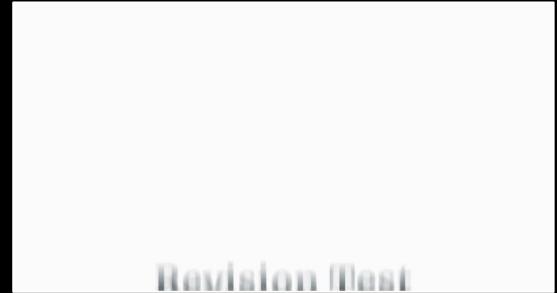
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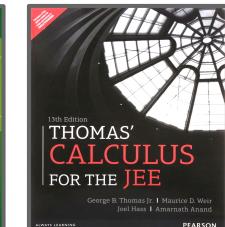
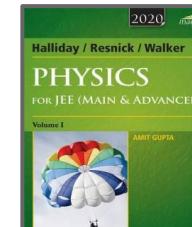
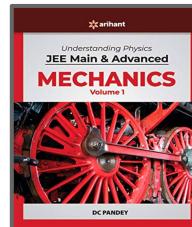
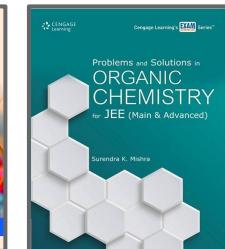
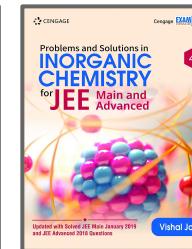
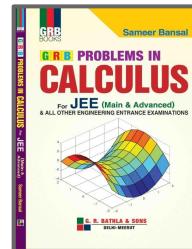
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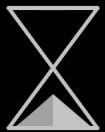


Solve for x: $\sqrt{\frac{x}{1-x}} + \sqrt{\frac{1-x}{x}} = \frac{13}{6}$



The **roots of the equation** $(5 + 2\sqrt{6})^{x^2 - 3} + (5 - 2\sqrt{6})^{x^2 - 3} = 10$

- A. $\pm 2, \pm \sqrt{3}$ B. $\pm\sqrt{2}, \pm 3$ C. $\pm 2, \pm\sqrt{2}$ D. None of these



Let **a** and **b** be the roots of the equation $x^2 - 10cx - 11d = 0$ and those of $x^2 - 10ax - 11b = 0$ are **c** and **d** then the value of **a + b + c + d**, when **a ≠ b ≠ c ≠ d**, is.

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If α, β be the roots of the equation $p(x^2 + n^2) + pnx + qn^2x^2 = 0$ then the value of $p(\alpha^2 + \beta^2) + p\alpha\beta + q\alpha^2\beta^2$ is -

- A. $\alpha + \beta$ B. 0 C. $p + q$ D. $\alpha + \beta + p + q$



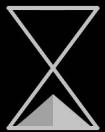
If the difference of the roots is equal to the product of the roots of the equation $2x^2 - (a+1)x + (a-1) = 0$, then the value of a is :

A. 2

B. 3

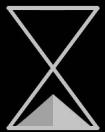
C. 4

D. 5



If one root of the equation $x^2 - x - k = 0$ is square of the other, then k is equal to:

- A. $2 \pm \sqrt{5}$
- B. $3 \pm \sqrt{2}$
- C. $2 \pm \sqrt{3}$
- D. $5 \pm \sqrt{2}$



If $a(p+q)^2 + 2bpq + c = 0$ and $a(p+r)^2 + 2bpr + c = 0$, then the value of qr is

A. $p^2 + \frac{a}{c}$

B. $p^2 + \frac{c}{a}$

C. $p^2 + \frac{a}{b}$

D. $p^2 + \frac{b}{a}$



If α and β are the roots of the equation $x^2 - ax + b = 0$ and $A_n = \alpha^n + \beta^n$, then which of the following is correct?

A. $A_{n+1} = aA_n + bA_{n-1}$

B. $A_{n+1} = bA_n + aA_{n-1}$

C. $A_{n+1} = aA_n - bA_{n-1}$

D. $A_{n+1} = bA_n - aA_{n-1}$



If the ratio of the roots of $x^2 + bx + c = 0$ and $x^2 + qx + r = 0$ be the same, then:

A. $r^2c = b^2q$

B. $r^2b = c^2q$

C. $rb^2 = cq^2$

D. $rc^2 = bq^2$



#JEELiveDaily Schedule



11th



Namo Sir | Physics

6:00 - 7:30 PM



Ashwani Sir | Chemistry

7:30 - 9:00 PM



Sameer Sir | Maths

9:00 - 10:30 PM

12th



Jayant Sir | Physics

1:30 - 3:00 PM



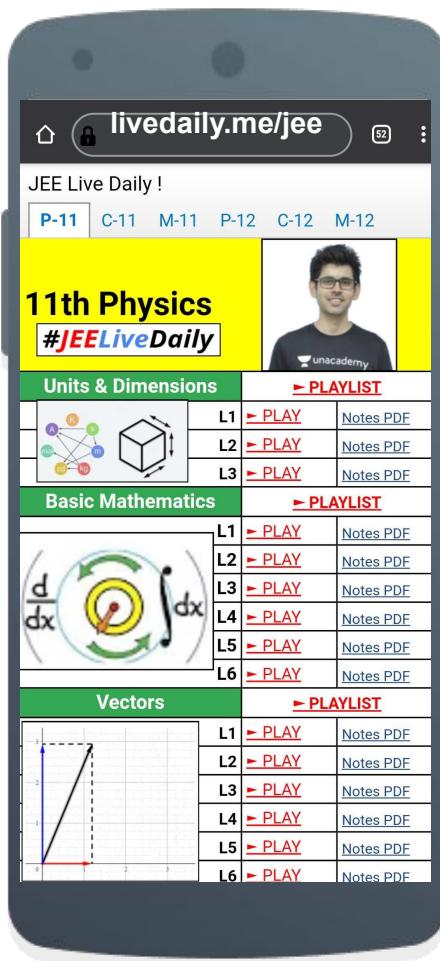
Anupam Sir | Chemistry

3:00 - 4:30 PM



Nishant Sir | Maths

4:30 - 6:00 PM

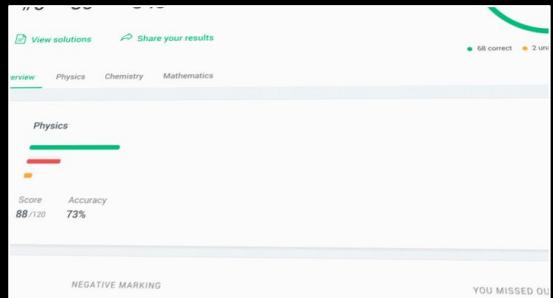


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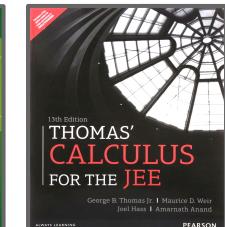
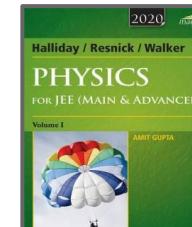
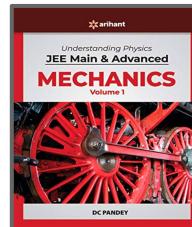
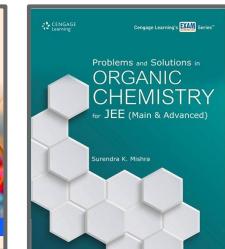
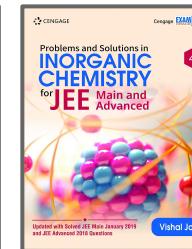
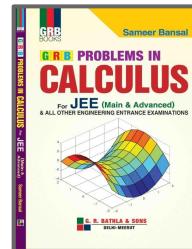
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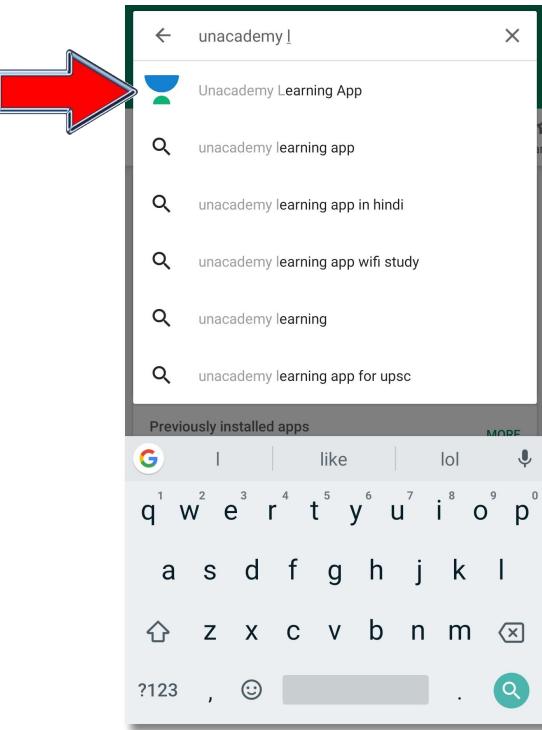


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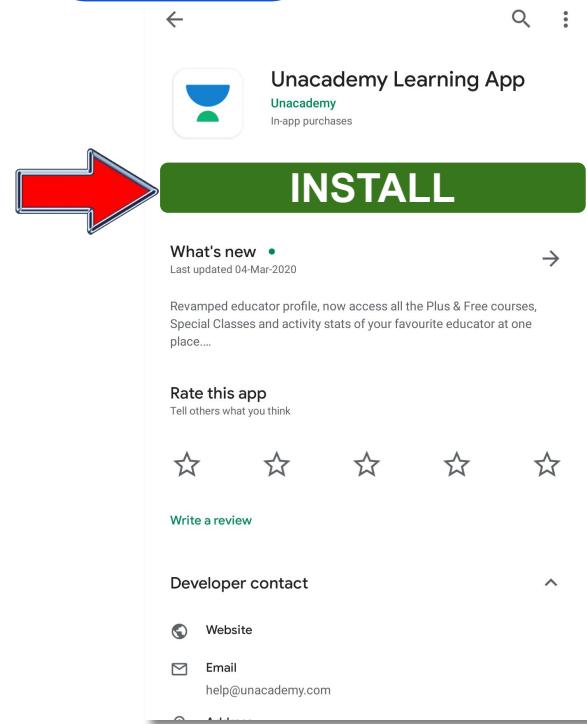


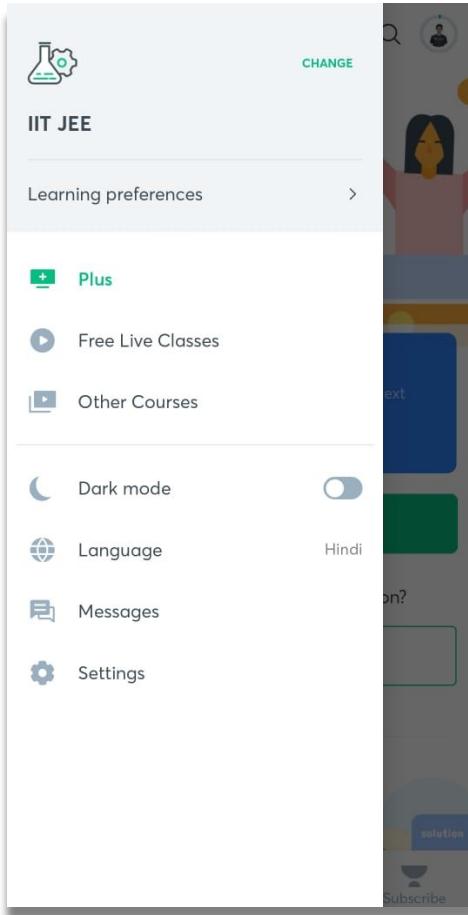
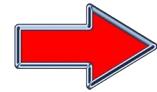
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