

Subject .

الميكانيكا

Year .

Month .

Day .

الف) at $\left| \frac{b}{r_a} \right| = \frac{2}{3} \Rightarrow \int \frac{1}{r^2} dr = \frac{2}{3} \Rightarrow -\frac{1}{r} = \frac{2}{3} \Rightarrow r = -\frac{3}{2}$

ط min

الف)

ب) ext $\left| \frac{mb}{r_a} \right| = \frac{-r}{3} \Rightarrow \frac{r^2}{3} = \frac{mb}{r_a} \Rightarrow r = \sqrt{\frac{3mb}{r_a}}$

$-\frac{A}{3r_a} = -\frac{(9-3r)}{r^2} \Rightarrow \frac{A}{3r_a} = \frac{9-3r}{r^2} \Rightarrow \frac{A}{r_a} = \frac{3(3-r)}{r^2}$

الف) ext $\left| \frac{b}{r_a} \right| = \frac{y}{r} \Rightarrow \frac{y}{r} = \frac{b}{r_a} \Rightarrow y = \frac{br}{r_a}$

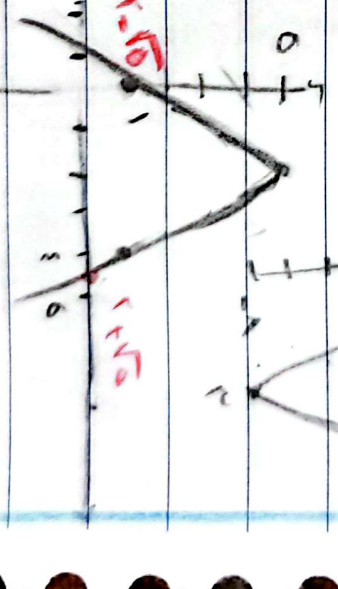
$9 - \frac{1}{r} = \frac{1}{r} \Rightarrow r = \frac{1}{2}$

الف) $r = 0 \Rightarrow y = \frac{b}{r_a} \Rightarrow y = \frac{b}{r_a}$

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ب) ext $\left| \frac{b}{r_a} \right| = \frac{-3}{r} \Rightarrow \frac{r^2}{3} = \frac{b}{r_a} \Rightarrow r = \sqrt{\frac{3b}{r_a}}$

$y = -\frac{3}{r} = -\frac{3}{\sqrt{\frac{3b}{r_a}}} = -\sqrt{\frac{3r_a}{b}}$



الماك are

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$-\frac{1}{r} = \frac{1}{r} \Rightarrow r = \frac{1}{2}$

ARSH

$$(x - \alpha)^2 (x - \beta) = (x^2 + kx^2 - kmx) (x - \beta) = (x^2 - \beta x^2 + kx^2 - kmx - \beta kx^2 + km\beta x) = (k - \beta)x^2 - kmx - \beta kx^2 + km\beta x$$

$$- \beta kx^2 + kmx - \beta kx^2 + km\beta x = kx^2 - \beta x^2 - kmx - \beta kx^2 + km\beta x = kx^2 - \beta x^2 - kmx - \beta kx^2 + km\beta x$$

$$\frac{\beta k}{-1} = \frac{km}{-1} \Rightarrow \beta k = km$$

$$(\sqrt{\alpha} - \sqrt{\beta})^2 = (\sqrt{\alpha} - \sqrt{\beta})^2 \Rightarrow \alpha + \beta - 2\sqrt{\alpha\beta} = \alpha - \beta - 2\sqrt{\alpha\beta} \Rightarrow \alpha + \beta = \alpha - \beta \Rightarrow \beta = -\alpha$$

$$\alpha + \beta = \frac{c}{a} = \frac{m}{1} = m \Rightarrow \alpha + \beta = m$$

$$\alpha + \beta = \frac{c}{a} = \frac{km}{1} = km \Rightarrow \alpha + \beta = km$$

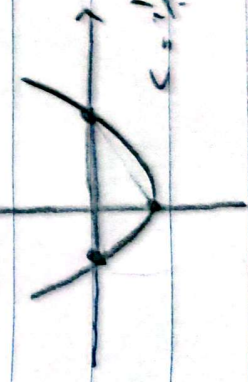
فقط $-\frac{1}{2}$

$\frac{c}{a} = 1$ في $x = m$

$km = m$

$$\alpha + \beta = \frac{c}{a} = \frac{1}{1} = 1$$

$$|\alpha - \beta| = \frac{c}{a} = \frac{1}{1} = 1 \Rightarrow (\alpha + \beta)^2 - 4\alpha\beta = 1 \Rightarrow (m)^2 - 4km = 1$$



$$\frac{\sqrt{\Delta}}{2a} = \frac{m \pm \sqrt{m^2 - 4km}}{2} = \frac{m \pm \sqrt{m^2 - 4km}}{2}$$

$$m \pm \sqrt{m^2 - 4km} = 0 \Rightarrow m = \sqrt{m^2 - 4km} \Rightarrow m^2 = m^2 - 4km \Rightarrow 4km = 0 \Rightarrow k = 0$$

جواب $\alpha = -\alpha$ و $\beta = \alpha$

$$y = x^r + ax + 1 \quad \text{cut } | x = \frac{-b}{r a} = \frac{-1}{r}$$

$$y = x^r - r a x + 1 \quad \text{cut } | \frac{r}{r}$$

a). min cut / y = $\frac{-\Delta}{\epsilon a} = \frac{-(9 - \epsilon a^2) - \sqrt{\dots}}{\epsilon a}$

$$\frac{\epsilon a^2 - 9}{\epsilon a} + \frac{\sqrt{\dots}}{\epsilon a} \quad r r a^2 - \sqrt{r} \epsilon a \rightarrow \frac{1}{\epsilon} r r a^2 - r \epsilon a - \sqrt{r} \dots$$

$$a = \frac{-9 \pm \sqrt{14}}{r}$$

$$\Delta a^2 - \sqrt{a} - 1 \Delta \quad a^2 - \sqrt{a} - 1 \Delta \times \Delta \quad (a + 9)(a - 14) - \sqrt{a}$$

$$x, x + r \rightarrow x B r(x)(x + r) = \frac{c}{a} \quad \text{na } x^r + r x \rightarrow x^r + r x + r a + 1$$

$$x^r + 1 \quad x^{r+1} - 1 = x^r$$

$$x + B, r x + r, \frac{a + 1}{1}, r = \frac{-b}{a}$$

$$a = r a + 1$$

$$a = r$$

$$(y, y + r), b \quad y + y + r, r a + 1, r, 1. \quad y + 1 = 0, y = -1$$

$$(r), (r), r$$

$$r \epsilon - r \epsilon r r$$

$$\text{cut } | \frac{-b}{r a} = \frac{-a}{r a} = \frac{1}{r} \rightarrow y = -a x \frac{1}{\epsilon} + \frac{a}{r} + r = \frac{a}{r} + r - 1$$

$$\frac{a}{r} + r = r b \times \frac{1}{r} = \frac{b}{r} - 1 \quad \frac{a}{r} + r = -1 \quad \frac{a}{r} = -r \quad a = -r^2$$

$$\text{cut } | \frac{-b}{r a} = \frac{b}{\epsilon b} = \frac{1}{\epsilon} \quad y = r b \times \frac{1}{14} - b \times \frac{1}{\epsilon} = 1, \frac{-b - 1}{1}$$

$$\frac{-b - 1}{1} = 15 \times \frac{1}{14} = 15 \times \frac{1}{\epsilon} + r = \frac{r}{\epsilon} = r a r = -\frac{1}{\epsilon}$$

ARSH $\frac{-b}{1} - 1 = \frac{1}{\epsilon} = \frac{-b}{1} = \frac{r}{\epsilon} \rightarrow b = -9 \quad b = a = -9 + 15 = 6$

