

۷ جمادی الثانی

SAT 31 DEC

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شنبه ۲۰ جمادی الثانی ۱۴۴۱

$$y_{max} = \frac{-D}{F_a} = V \rightarrow \frac{-(b^2 + 12)}{-2} = V \rightarrow b^2 + 12 = 21 \rightarrow b^2 = 9 \rightarrow b = \pm 3$$

$$f(x) = x^2 + 2x^2 + 12 \rightarrow t = x^2 \rightarrow t^2 + 2t + 12 \rightarrow D = b^2 - 4ac \rightarrow 4 - 12 = -8 < 0$$

ریشه‌ها حقیقی ندارند

$$f(x) = (4 - x^2)^2 - 2(4 - x^2) - 12 \rightarrow t = 4 - x^2 \rightarrow t^2 - 2t - 12 = 0 \rightarrow (t - 2)(t + 4) = 0 \rightarrow t = 2 \rightarrow 4 - x^2 = 2 \rightarrow x^2 = 2 \rightarrow x = \pm \sqrt{2}$$
$$t = -4 \rightarrow 4 - x^2 + 12 = 0 \rightarrow x^2 = 16 \rightarrow x = \pm 4$$

$$S = \frac{-b}{a} \rightarrow 2 + 2 + 12 = \frac{16}{2} \rightarrow 2a + 12 = 16 \rightarrow 2a = 4 \rightarrow a = 2$$
$$p = \frac{c}{a} \rightarrow \frac{m}{2} = 12 \rightarrow m = 24$$

$\alpha = 2$
$\beta = 12$

$$\rightarrow 4x^2 - 16x + 12 = 0 \rightarrow D > 0 \checkmark$$

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یکشنبه

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SUN 1 JAN

$$r\alpha - \beta = \varepsilon \rightarrow r\alpha + r\beta - r\beta = \varepsilon \quad -r$$

$$r(\alpha + \beta) + r\beta = \varepsilon$$

$$r - r\beta = \varepsilon \rightarrow \beta = 0$$

$$\alpha + \beta = r \rightarrow \alpha = r$$

$$p = \frac{c}{a} = \frac{m-1}{r} = 0 \rightarrow m-1 = 0 \rightarrow \boxed{m=1}$$

$$rx^r - 9x = 0 \quad \Delta \checkmark$$

$$p-1 \rightarrow \frac{c}{a} = 1 \quad \frac{m^r-1}{-m} = 1 \rightarrow m^r+m-1=0 \quad -d$$

$$(m+1)(m-1)=0$$

$$\boxed{m=1} \rightarrow -x^r + \varepsilon x - 1 = 0 \rightarrow \Delta \checkmark \rightarrow 1x-1 \rightarrow 1x \checkmark$$

$$m=-1 \rightarrow rx^r + \varepsilon x + 1 = 0 \rightarrow \Delta = 0 \quad x \quad 1x-1x=0 \quad \checkmark$$

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

$$\alpha\beta^r = r \rightarrow \alpha\beta \times \beta = \varepsilon \rightarrow r\beta = \varepsilon \rightarrow \beta = \frac{r}{r}$$

$$\alpha + \frac{\varepsilon}{r} = r \rightarrow \alpha = \frac{r}{\frac{\varepsilon}{r}} = \frac{r}{\varepsilon}$$

$$s = \alpha + \beta = -\frac{b}{a} \quad \frac{r}{r} + \frac{r}{\varepsilon} = m \rightarrow \boxed{m = \frac{\varepsilon r}{1r}}$$

آغاز سال ۲۰۲۳ میلادی

$$x^r - \frac{\varepsilon r}{1r}x + r \rightarrow \Delta \checkmark$$

$$\beta = r\alpha$$

-V

$$S = \alpha + \beta = \frac{-b}{a} \rightarrow \Sigma a = \Sigma \rightarrow \alpha = 1$$

$$\beta = r\alpha = r$$

$$P = \frac{c}{a} = \alpha\beta \rightarrow \boxed{m = r}$$

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$$\alpha^r - \Sigma x + r = 0 \rightarrow b > 0$$

$$\alpha^r - V\alpha + r = 0 \rightarrow \alpha^r + r = V\alpha$$

$$(\alpha)^r + \left(\frac{r}{\alpha}\right)^r \Rightarrow (\alpha + \frac{r}{\alpha})(\alpha^r + \frac{\Sigma}{\alpha^r} - r) \Rightarrow \alpha + \frac{r}{\alpha} = \frac{\alpha^r + r}{\alpha}$$

$$= \frac{V\alpha}{\alpha} = V$$

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$$\alpha^r + \frac{\Sigma}{\alpha^r} = \frac{\alpha^r + \Sigma}{\alpha^r} \Rightarrow \frac{(\alpha^r + r)^r - \Sigma \alpha^r}{\alpha^r} = \frac{(\alpha^r + r)^r - \Sigma \alpha^r}{\alpha^r}$$

$$= \Sigma a - \Sigma = \Sigma b \quad (\alpha + \frac{r}{\alpha})(\alpha^r + \frac{\Sigma}{\alpha^r} - r) = V(\Sigma b - r) \quad \boxed{(r, 0)}$$

$$\max \leftarrow \min \frac{1}{a} \alpha x$$

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$$x_s = \frac{-b}{ra} = \frac{-80}{-r} = \frac{8}{r}$$

$$-1 \cdot t^r + 8 \cdot t = 0$$

$$t(-1 \cdot t + 8) = 0 \quad \boxed{5}$$

$$y_s = -1 \cdot \left(\frac{8}{r}\right) + 8 \cdot \left(\frac{8}{r}\right) = \boxed{42, 8}$$

$$t = 0 \quad \boxed{t = 8s}$$

ارتفاع ماکسیمم
زمن که توپ به زمین می‌رسد

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TUE 3 JAN

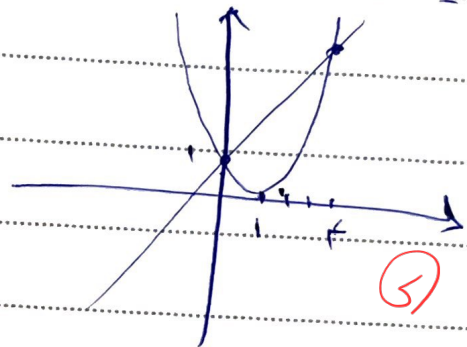
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$$(x-1)^2 = 2x+1 \quad \text{الف}$$

$$x^2 - 2x + 1 = 2x + 1$$

$$x^2 - 4x = 0$$

$$x(x-4) = 0 \rightarrow \boxed{x = 0, 4} \quad \text{بجواب دارد}$$



$$x^2 + 2x = |x+2| \quad \text{ب}$$

$$x^2 + 2x - x - 2 = 0$$

$$x^2 + x - 2 = 0 \rightarrow \boxed{x = -2, 1} \quad \text{بجواب دارد}$$

