

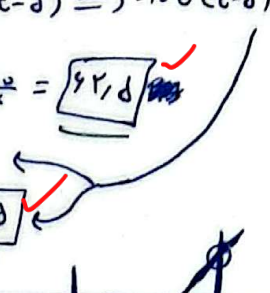
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$P = \frac{c}{a} = \alpha\beta = 3 \Rightarrow \frac{1}{\beta} = \frac{3}{\alpha} \Rightarrow \boxed{\beta = \frac{\alpha}{3}} \quad (I)$ $\alpha\beta = 3 \Rightarrow \boxed{\alpha = \frac{9}{\beta}} \quad (II)$ $S = -\frac{b}{a} = \alpha + \beta = m$ $\stackrel{(I) \times (II)}{\Rightarrow} \alpha + \beta = \frac{9}{\beta} + \frac{\beta}{3} = \frac{3\beta + 1\beta}{1\beta} = \frac{4\beta}{1\beta} \Rightarrow \boxed{m = \frac{4\beta}{1\beta}} \rightarrow m = \frac{4\beta}{1\beta} \rightarrow m = 4$	۶ (۲)
$\alpha = 3\beta$ $S = \alpha + \beta = -\frac{b}{a} = 4 \Rightarrow \alpha/\beta = 3 \Rightarrow \boxed{\beta = 1} \quad (I)$ $\alpha = 3\beta \Rightarrow \boxed{\alpha = 3} \quad (II)$ $P = \frac{c}{a} = m = \alpha\beta \Rightarrow \boxed{m = 3} \checkmark \rightarrow m = 3$ $\stackrel{(I) \times (II)}{\Rightarrow} \alpha\beta = (3)(1) = 3$	۷ (۲)
$P = \frac{c}{a} = \alpha\beta = 2 \Rightarrow \beta = \frac{2}{\alpha} \Rightarrow \boxed{\beta = \frac{2}{\alpha}} \quad (I)$ $S = -\frac{b}{a} = 6$ $P = \frac{c}{a} = 2$ $\alpha + \frac{2}{\alpha} = 6 \stackrel{(1)}{\Rightarrow} \alpha^2 + 2 = 6\alpha \Rightarrow \alpha^2 - 6\alpha + 2 = 0 \Rightarrow \boxed{\alpha = 1} \checkmark$	۸ (۲)
$h(t) = -10t^2 + 50t = -10(t^2 - 5t) = -10t(t-5) \Rightarrow -10t(t-5) = 0$ $y_1 = -\frac{5}{-10} = \frac{50 - 2500}{-10} = \frac{2500}{-10} = -250$ $t=0$ به اعطای ضرب زدن با تریگن برنوب $t=5$ به اعطای برخورد تریگن بر زمین 	۹ (۲)
الف) $(n-1)^2 = 2n+1$ $\Rightarrow n^2 - 2n + 1 = 2n + 1 \Rightarrow n^2 - 4n = 0 \Rightarrow n(n-4) = 0 \Rightarrow \boxed{n=0} \checkmark$ در جواب دارد ب) $n^2 + 2n = n+2$ $\stackrel{(I)}{n \geq -2} \Rightarrow n^2 + 2n = n+2 \Rightarrow n^2 + n - 2 = 0 \Rightarrow (n+2)(n-1) = 0 \Rightarrow \boxed{n=1} \quad (II)$ $\stackrel{(II)}{n < -2} \Rightarrow n^2 + 2n = -(n+2) \Rightarrow n^2 + 3n + 2 = 0 \Rightarrow (n+2)(n+1) = 0 \Rightarrow \boxed{n=-1} \quad (III)$ $\stackrel{(III) \cap (II)}{\Rightarrow} \boxed{n=-2} \quad (IV)$ در جواب دارد ج) $n^2 + 2n = n+2$ $\stackrel{(I)}{n \geq -2} \Rightarrow n^2 + 2n = n+2 \Rightarrow n^2 + n - 2 = 0 \Rightarrow (n+2)(n-1) = 0 \Rightarrow \boxed{n=1} \quad (II)$ $\stackrel{(II)}{n < -2} \Rightarrow n^2 + 2n = -(n+2) \Rightarrow n^2 + 3n + 2 = 0 \Rightarrow (n+2)(n+1) = 0 \Rightarrow \boxed{n=-1} \quad (III)$ $\stackrel{(III) \cap (II)}{\Rightarrow} \boxed{n=-2} \quad (IV)$ در جواب دارد د) $n^2 + 2n = n+2$ $\stackrel{(I)}{n \geq -2} \Rightarrow n^2 + 2n = n+2 \Rightarrow n^2 + n - 2 = 0 \Rightarrow (n+2)(n-1) = 0 \Rightarrow \boxed{n=1} \quad (II)$ $\stackrel{(II)}{n < -2} \Rightarrow n^2 + 2n = -(n+2) \Rightarrow n^2 + 3n + 2 = 0 \Rightarrow (n+2)(n+1) = 0 \Rightarrow \boxed{n=-1} \quad (III)$ $\stackrel{(III) \cap (II)}{\Rightarrow} \boxed{n=-2} \quad (IV)$ در جواب دارد	۱۰ (۲)