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$$r_n^r - an + r = 0 \quad n \quad r_n$$

$$r = r_n = \frac{a}{r} \rightarrow n = \frac{a}{r}$$

$$n = \frac{r}{r} = \frac{a}{r} \quad \boxed{a=1}$$

$$n = -\frac{r}{r} = -\frac{a}{r} \quad \boxed{a=-1}$$

جواب: $1 - (-1) = 2$ (۵)

$$r_n^r - (m+1)r + 1 = 0$$

$$\frac{1}{\sqrt{a}} + \frac{1}{\sqrt{b}} = a$$

$$\frac{\sqrt{b} + \sqrt{a}}{\sqrt{ab}} = a \Rightarrow \sqrt{a+b+2\sqrt{ab}} = \sqrt{ab}$$

$$\frac{\sqrt{m+14}}{\sqrt{4}} = \frac{1}{4} = a$$

$$\frac{r_a}{r_b} = \frac{m+14}{4} \rightarrow m = -1$$

$$-1m^2 + 3m + 2 = 0$$

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

جواب: (۵)

$$r_n^r + kr^r - 9m - r = 0$$

$$\alpha + \beta = 1 \quad \alpha\beta = -r$$

$$\beta^r - \beta - r = 0 \xrightarrow{\alpha/\beta} -\frac{r}{\beta} + \beta = 1 \quad \alpha = -\frac{r}{\beta}$$

$$(\beta-r)(\beta+1) = 0$$

$$\beta = -1 \rightarrow \alpha = r$$

$$\alpha = -1$$

$$n = r \rightarrow r^r + kr - 1 = 0 \quad k = -r$$

$$\boxed{k = -3}$$

جواب: (۵)

$$r_n^r + 4m + a = 0 \quad \alpha \neq \beta$$

$$9 - 2a - 4\sqrt{a} = 16 + 16\sqrt{a}$$

$$a - 4\sqrt{a} = 16\sqrt{a} + 2a$$

$$2a = a \rightarrow \boxed{a=1} \quad \sqrt{a} = -4\sqrt{a}$$

$$r_n^r + r\beta^r = 16\sqrt{r} + 16$$

$$\frac{a}{r}(\alpha + \beta^r) + \frac{1}{r}(\alpha^r - \beta^r) = 16\sqrt{r} + 16$$

$$\frac{a}{r}((\alpha+\beta)^r - r\alpha\beta) + \frac{1}{r}(\alpha - \beta)(\alpha + \beta) = 16\sqrt{r} + 16$$

$$\frac{a}{r}(r^4 - 2a) + \frac{1}{r}(\sqrt{a}(-4)) = 16\sqrt{r} + 16$$

$$r_n^r - 4m - a = 0$$

$$r_p^r - r\beta^r + r\alpha = ?$$

$$r_n^r = \frac{v \pm \sqrt{v^2 + 4r}}{2}$$

$$n = \pm \sqrt{\frac{v + \sqrt{4a}}{r}}$$

$$r_p^r = r \left(\frac{-v - \sqrt{4a}}{r} \right) = \frac{(-v - \sqrt{4a})^r}{r} = \frac{v^2 + 4a + 16\sqrt{4a}}{r}$$

$$P = \frac{-v - \sqrt{4a}}{r} = \frac{-29 + v\sqrt{4a}}{r}$$

جواب: (۵)

$$r_n^r - an + b = 0 \quad r_n^r + an - r = 0$$

$$\alpha + \frac{1}{r} \quad \beta + \frac{1}{r}$$

$$\alpha\beta = -r$$

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

$$\alpha\beta + \frac{1}{r}(\alpha + \beta) + \frac{1}{r} = \frac{b}{r}$$

$$-r + \frac{1}{r}(-\frac{a}{r}) + \frac{1}{r} = \frac{b}{r}$$

$$\boxed{b = -4}$$

$$\alpha + \beta + 1 = \frac{a}{r} \quad \boxed{1 = a}$$

$$\frac{-a}{r}$$

