

$$3u^r - au + k = 0$$

$$\alpha\beta = \frac{k}{3} \Rightarrow 3\beta^r = \frac{k}{\alpha} \Rightarrow \beta^r = \frac{k}{3\alpha} \Rightarrow \beta = \pm \frac{r}{3}$$

$$\alpha = 3\beta \left\{ \begin{array}{l} \beta = \frac{r}{3} \Rightarrow \alpha = r \rightarrow \alpha + \beta = \frac{4}{3} \rightarrow \frac{a}{r} = -\frac{1}{r} \\ \beta = -\frac{r}{3} \Rightarrow \alpha = -r \rightarrow \alpha + \beta = -\frac{4}{3} \rightarrow \frac{a}{r} = \frac{1}{r} \end{array} \right\} \rightarrow 1 + 1 = \boxed{14}$$

$$34u^r - (m+1k)u + 1 = 0$$

$$\alpha \rightarrow \frac{1}{\sqrt{\alpha}} \quad \beta \rightarrow \frac{1}{\sqrt{\beta}}$$

$$\left(\frac{1}{\sqrt{\alpha}} + \frac{1}{\sqrt{\beta}} \right)^r = \frac{1}{\alpha} + \frac{1}{\beta} + \frac{r}{\sqrt{\alpha\beta}} \Rightarrow \frac{\alpha + \beta}{\alpha\beta} + \frac{r}{\sqrt{\alpha\beta}} = 34$$

$$\frac{\frac{m+1k}{34}}{\frac{1}{34}} + \frac{r}{\frac{1}{4}} = 34 \Rightarrow m + 1k + 14r = 34 \Rightarrow m = -1$$

$$-u^r + ru + r = 0 \Rightarrow \boxed{-r}$$

$$rk^r + ku^r - au - r = 0$$

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

$$\textcircled{1} \left\{ \begin{array}{l} r\alpha^r + k\alpha^r - a\alpha - r = 0 \\ r\beta^r + k\beta^r - a\beta - r = 0 \end{array} \right.$$

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

$$1 = \alpha^r + \beta^r - r \Rightarrow \alpha^r + \beta^r = 1 + r$$

$$r(\alpha + \beta)(\alpha^r + \beta^r - \alpha\beta) + k(\alpha^r + \beta^r) - a(\alpha + \beta) - r = 0$$

$$r(1 + r) + k(1 + r) - a(1 + r) - r = 0 \Rightarrow rk = 13 - 21 \Rightarrow rk = -18 \Rightarrow \boxed{k = -3}$$

$$u^r + 4u + a = 0$$

$$\alpha < \beta < 0$$

$$3\alpha^r + 2\beta^r = 12\sqrt{r} + 18$$

$$\frac{d}{r}\alpha^r + \alpha^r + \frac{d}{r}\beta^r - \beta^r = 12\sqrt{r} + 18$$

$$\frac{d}{r}(\alpha^r + \beta^r) + (\alpha + \beta)(\alpha - \beta) = 12\sqrt{r} + 18$$

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

$$34 - 2a = \alpha^r + \beta^r$$

$$\frac{d}{r}(34 - 2a) + (-4)(\sqrt{4a}) = 12\sqrt{r} + 18$$

$$\frac{\sqrt{a}}{r} = \frac{\sqrt{34 - 2a}}{r} = \frac{12\sqrt{r} + 18}{r}$$

$$\frac{d}{r}(34 - 2a) = 18$$

$$90 - 2a = 18 \Rightarrow \boxed{a = 1}$$

$$u^r - V u^r - a = 0$$

$$u^r = t \quad t^r - V t - a = 0$$

$$t = \frac{V \pm \sqrt{V^2 + 4a}}{2} \quad \left\{ \begin{array}{l} \frac{V + \sqrt{4a}}{2} \\ \frac{V - \sqrt{4a}}{2} \end{array} \right\} \text{OOD}$$

$$u = \pm \sqrt{\frac{V + \sqrt{4a}}{2}}$$

$$s = 0 \quad p = - \frac{V + \sqrt{4a}}{2}$$

$$r \left(- \frac{V + \sqrt{4a}}{2} \right)^2 - 0 + 0 = \frac{11a + 16\sqrt{4a}}{2} = \boxed{a + V\sqrt{4a}}$$

$$r u^r - a u + b = 0 \quad \alpha' = \alpha + 0.1a$$

$$r u^r + a u - 4s_0 = 0 \quad \beta' = \beta + 0.1a \rightarrow \alpha + \beta + 1 = \alpha' + \beta' \Rightarrow \alpha' + \beta' = \frac{1}{r}$$

$$\frac{a}{r} = \frac{1}{r} \Rightarrow \boxed{a = 1}$$

$$\alpha + \beta = -\frac{1}{r}$$

$$(0.1a + \alpha)(0.1a + \beta)$$

$$= 0.1a + 0.1a(\alpha + \beta) + \alpha\beta$$

$$0.1a + \left(\frac{1}{r}\right)\left(-\frac{1}{r}\right) - c = \frac{1}{r} - \frac{1}{r} - c = \frac{b}{r}$$

$$b = -4$$

$$\left[\frac{ab}{c} \right] = \left[\frac{-4}{-1} \right] = [-1, \infty] = \boxed{-2}$$

$$a u^r - a u - b = 0$$

$$\alpha + \beta = 1 \Rightarrow s = 1 - \alpha$$

$$r_0 \beta^r + r_0 \alpha^r - r_0 s = 1V$$

$$r_0 (1 - \alpha)^r + r_0 \alpha^r - r_0 (1 - \alpha) = 1V$$

$$4 \cdot \alpha^r - 4 \cdot \alpha + r_0 = 0 \Rightarrow s = 1 \quad p = \frac{1}{r} \Rightarrow -\frac{b}{a} = \frac{1}{r_0} \Rightarrow a = -r_0 b \Rightarrow b = -\frac{1}{r_0} a$$

$$\frac{\sqrt{a^r + [ab]}}{a} = \frac{\sqrt{a^r + r_0 \left(-\frac{1}{r_0} a\right)}}{a} = \frac{\sqrt{a^r - \frac{1}{a} a^r}}{a} = \frac{\sqrt{\frac{r}{a} a^r}}{|a|} = \boxed{\frac{r}{\sqrt{a}}}$$

$$u^r - (a+1)u + a = 0$$

$$\sum_{n=1}^{\infty} u^n \rightarrow a, p$$

$$u^r - (ra+1)u + b = 0 \rightarrow u^r - 10u + b = 0 \Rightarrow u_1 + u_2 = 10 \Rightarrow u_1 = 5 \quad u_2 = 5$$

$$p = 5, \quad \boxed{r=1}$$

$$n^r + n - 1 - m^r = 0$$

(9)

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

$$\alpha^r + \beta^r = (\alpha + \beta)^r - r\alpha\beta \Rightarrow 1 - r(\alpha\beta)(m^r + 1) = 1 + r m^r + r = r m^r + r \xrightarrow{m=0} r(0) + r = \boxed{r}$$

$$A(r, y)$$

$$B(-a, y)$$

(10)

$$y = an^r + bn + c \Rightarrow y = raa - ab + c$$

$$-\frac{a}{\epsilon a} = 1$$

$$y = a + r b + c$$

$$0 = 14a - 11b \Rightarrow b = 14a \Rightarrow b = -\epsilon c$$

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

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

$$r = a + r\alpha\beta \Rightarrow r\alpha\beta = -1 \Rightarrow \alpha\beta = -\frac{1}{r}$$

$$\frac{c}{a} = -\frac{1}{r} \Rightarrow a = -rc$$

$$-\frac{b^r - \epsilon a c}{\epsilon a} = -\left(\frac{b \times b}{a \times r} - c\right) = -\left(\frac{b}{x} - c\right) \Rightarrow \boxed{c = \frac{1}{r}}$$