

$$\left. \begin{aligned} \alpha^r + m\alpha &= \gamma m \\ -\beta^r + m\beta &= \gamma m \end{aligned} \right\} + \rightarrow \alpha^r + \beta^r + \beta^r \cdot \lambda + \alpha^r \cdot \lambda = \epsilon m \rightarrow \gamma(5^r - \gamma p) - 14 - \epsilon m = 0 \quad \text{--- V}$$

$$\gamma(m^r - \gamma(-\gamma m)) - 14 - \epsilon m = 0$$

$$\frac{(\alpha^r - m\beta)}{\lambda} + \gamma(m\alpha - \beta^r) = 0 \rightarrow m\alpha - \beta^r = -\lambda \rightarrow m\alpha = \beta^r - \lambda \quad m^r + \gamma m = \lambda \rightarrow m \begin{bmatrix} \gamma \\ -\epsilon \end{bmatrix}$$

$$m\beta = \alpha^r - \lambda \quad -\frac{b}{a} = -m \begin{bmatrix} \gamma \\ \epsilon \end{bmatrix}$$

5

$$m(x-h)^r + k = m(x-h)^r + \lambda = m x^r + \epsilon x + \frac{m}{\gamma} + V \quad \text{--- 1}$$

$$m(x^r + h^r - \gamma x h) + \lambda = m x^r + \epsilon x + \frac{m}{\gamma} + V \rightarrow -\gamma m h = \epsilon \rightarrow m h = -\frac{\epsilon}{\gamma} \rightarrow h = -\frac{\epsilon}{\gamma m}$$

10

$$m h^r + \lambda = \frac{m}{\gamma} + V \rightarrow h^r \frac{\epsilon}{m} = \frac{m}{\gamma} - 1 \rightarrow \frac{\epsilon}{m} = \frac{m - \gamma}{\gamma} \rightarrow \lambda = m^r - \gamma m \rightarrow m^r - \gamma m - 1 = 0$$

$$(m - \epsilon)(m + \gamma) = 0 \rightarrow m = \frac{\gamma}{\epsilon} \quad \text{--- 1}$$

$$f(x) = -\gamma x^r + \epsilon x + 4 \quad \begin{matrix} -1 \\ -\frac{\epsilon}{a} \begin{bmatrix} \gamma \\ \epsilon \end{bmatrix} = k \end{matrix}$$

15

$$y = a(x - \gamma)^r + 4 \quad \epsilon = a(-\gamma)^r + 4 \rightarrow \epsilon = \epsilon a + 4 \rightarrow \gamma = \gamma a + \gamma \rightarrow \boxed{a = -\frac{1}{\gamma}} \quad \text{--- 9}$$

$$y = -\frac{1}{\gamma}(x^r + \epsilon - \epsilon x) + 4 \rightarrow y = -\frac{x^r}{\gamma} - \gamma + \gamma x + 4 \rightarrow y = -\frac{x^r}{\gamma} + \gamma x + \epsilon$$

20

$$\frac{1}{a} + \frac{1}{b} = \frac{a+b}{ab} = \frac{-\frac{b}{a}}{\frac{\epsilon}{a}} = \frac{-b}{\epsilon} = \frac{-\gamma}{\epsilon} = \boxed{-\frac{1}{\gamma}}$$

25

$$\epsilon - \gamma(\epsilon a + \epsilon) + (\gamma a^r + 4a + \gamma) = 0 \rightarrow \epsilon - 14 - 1 + \gamma a^r + 4a + \gamma = 0$$

$$\gamma a^r - \gamma a - 1 = 0 \rightarrow a = \frac{1}{\gamma} \quad \rightarrow x^r - 14x + 17 = 0 \rightarrow (x - \gamma)(x - 9) = 0 \rightarrow x = \gamma \quad \boxed{9}$$

30