

$$a(f)u \geq 0 \Rightarrow f(u) \times u \geq 0$$

$$\Rightarrow \text{[Graph of a function with roots at } -0.5 \text{ and } 2.5 \text{]} \Rightarrow [-0.5, 0] \cup [2.5, \infty)$$

$$\frac{-u}{\sqrt{f(u)}} \geq 0 \Rightarrow \begin{matrix} -u \geq 0 \Rightarrow u \leq 0 \\ f(u) \neq 0 \end{matrix}$$

$$f(u) > 0 \Rightarrow -3 < u < 0 \Rightarrow -2.5 - 1 \Rightarrow \textcircled{4.5}$$

$$f(x) = f(x) \cdot x^2 = 5 - 9 + 4 \Rightarrow -f(x) = x^2 \Rightarrow -x^2 f(x) = 5$$

$$f(-x) \Rightarrow f(-x) + 5 = 5 + 9 + 4 \Rightarrow f(-x) + 5 = 18 \Rightarrow f(-x) = 13$$

$$\begin{aligned} f(0) &= u - \sqrt{u} + 5 \Rightarrow 0 - \sqrt{9} = 0 - 3 = -3 \\ f(x) &= x^2 u + 3 \Rightarrow 5 + 3 = \sqrt{\quad} \textcircled{1} \\ f(1) &= x + 3 = 4 \\ f(0) &= 0 - \sqrt{u} = 0 - 3 = -3 \textcircled{3} \end{aligned} \quad \left\{ \begin{array}{l} u + x = 9 \end{array} \right.$$

$$f(u) = am^2 - b m + 4$$

$$\begin{aligned} f(m-1) &= a(m-1)^2 - b(m-1) + 4 \Rightarrow a(m^2 - 2m + 1) - b m + b + 4 \\ &= am^2 - 2am + a - b m + b + 4 \end{aligned}$$

$$\begin{aligned} (am^2 - 2am + a - b m + b + 4) - (am^2 - b m + 4) &= -2am + a + b \\ -2am + a + b &= 4a + 4 \Rightarrow -2a = 4 \Rightarrow a = -2 \Rightarrow b = 4 \Rightarrow a - b = \textcircled{-6} \end{aligned}$$

$$f(x) = x^2 - 2(x) + 1 = x^2 - 2x + 1$$

$$f(-1) \Rightarrow f(-1) = (-1)^2 - 2(-1) + 1 = 1 + 2 + 1 = 4$$

$$f(x) + f(-1) = f(1) + 4 \Rightarrow -x + 4 = x$$

$$f^x(x) = (f(x))^x = (-1)^x = 1 \Rightarrow \frac{x}{1} = \boxed{x}$$

$$\frac{w(f)(1x+1) - xf(x)}{x+1} = \frac{xy - 1}{x} = \frac{y-1}{x} = \boxed{x}$$

$$\left. \begin{array}{l} f(1) = 1 \Rightarrow f(1) = 4 \\ f(x) = x \quad f(x) = y \\ f(1) = y - x = x \end{array} \right\}$$

$$\frac{y-x}{x} = 0$$

$$f(\sqrt{m}) = (\sqrt{m})^x + \frac{1}{(\sqrt{m})^x} = m + \frac{1}{m} \Rightarrow (f(\sqrt{m}))^x = (m + \frac{1}{m})^x$$

$$m^x + x \ln(\frac{1}{m}) + \frac{1}{m^x} = m^x + x + \frac{1}{m^x} \quad \text{g} \quad f(m) = m^x + \frac{1}{m^x}$$

$$\Rightarrow f(m) = m^x + \frac{1}{m^x} \Rightarrow (f(\sqrt{m}))^x - f(m) = m^x + x + \frac{1}{m^x} - (m^x + \frac{1}{m^x})$$

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