

$$y = -\frac{1}{r}x^2 + \frac{r}{\omega}x + 1 \quad \frac{-b}{2a} = \left(-\frac{\frac{r}{\omega}}{-\frac{2}{r}}\right) = \frac{r}{\omega} \rightarrow 3 \Rightarrow \frac{r}{\omega} + 0 = 3 \Rightarrow 0 = \frac{14}{\omega}$$

$$-\frac{1}{r^2}\left(\frac{r}{\omega}\right) + \frac{r}{\omega}\left(\frac{r}{\omega}\right) + 1 = -\frac{r}{r\omega} + \frac{r}{\omega} + 1 = 1 + \frac{r}{\omega} = \frac{r+1}{\omega} \rightarrow \frac{r+1}{\omega} + \Delta = 4 \Rightarrow \Delta = \frac{4\omega - r - 1}{\omega}$$

$$-\frac{1}{r}\left(x - \frac{r}{\omega}\right)^2 + \frac{r}{\omega}\left(x - \frac{r}{\omega}\right) + 1 + \frac{4\omega - r - 1}{\omega}$$

$$-\frac{1}{r}\left(x^2 - \frac{2rx}{\omega} + \frac{r^2}{\omega^2}\right) + \frac{r}{\omega}x - \frac{r^2}{\omega^2} + 1 + \frac{4\omega - r - 1}{\omega} \Rightarrow -\frac{1}{r}x^2 - \frac{2r}{\omega}x + \frac{r+1}{\omega} + \frac{r}{\omega}x - \frac{r^2}{\omega^2} + 1 + \frac{4\omega - r - 1}{\omega} = 0$$

الستیم $\rightarrow f(1) = 4$

$$rx + 2 = 1 \Rightarrow rx = -1 \Rightarrow x = -\frac{1}{r}$$

$$1 - 2f(1) \Rightarrow 1 - 2(4) = -7 \Rightarrow A\left(-\frac{1}{r}, -7\right) \Rightarrow AB = -\frac{1}{r} \times -7 = \frac{7}{r}$$

$$y = 3 - \sqrt{2}x \Rightarrow 3 - \sqrt{2}(x+1) \Rightarrow -(3 - \sqrt{2}(x+1)) = -3 + \sqrt{2}x + 2$$

$$\Rightarrow -3 + \sqrt{2}x + 2 + 1 = 2 + \sqrt{2}x + 2$$

$$2 + \sqrt{2}x + 2 = 3\omega \Rightarrow \sqrt{2}x + 2 = \omega \Rightarrow rx + 2 = r\omega \Rightarrow rx = r\omega - 2$$

$$x = \frac{1}{r} = 0.125$$

$$f(x-1) + g(x+1) \Rightarrow D_f = [a, 4] \Rightarrow (a+1, 5)$$

$$D_g = [-1, b] \Rightarrow [-2, b-1]$$

$$a+1 = -2 \Rightarrow a = -3$$

$$b-1 = 5 \Rightarrow b = 6 \quad a-b = -3-6 = -9$$

$$D_{f(x+1)} \Rightarrow [-3, 5] \quad D_{f(x)} \Rightarrow \left[-\frac{r}{r}, \frac{5-1}{r}\right] \Rightarrow D_{f(x)} = D_{rf(x)-1}$$

$$R_{f(x+1)} = [-1, 2] \Rightarrow R_{f(x)} = [-1, 2] \quad (D_{rf(x)} \circ r = [-1, 2])$$

$$R_{rf(x)-1} = [(-1)r-1, (2r)-1] = [-5, 1]$$

$$\sqrt{1+rf(x)-1} \Rightarrow \sqrt{0+2} \Rightarrow R = [0, 2]$$

