

	-8	0	4	8				
n	-	-	0	+	+	+		
f(n)	+	0	-	-	0	+	0	-
P(n)	-	+	0	-	+	+	-	

$$D_f = (-5, 0] \cup (2, 5)$$

	-۳	۰	۲	۵
-n	+	+	۰	-
f(n)	-	۰	+	۰
P(n)	-	+	+	-

$$P_f = (-3, 0) \cup (0, 2) \cup (5, +\infty)$$

$$\rightarrow n=2 \quad f(2) - 2f(2) = (-2)^2 - 2(-2) + 4 = 4 + 4 + 4 = 12$$

$$\text{چون } f(2) = -2 \text{ داریم}$$

$$f(-2) + 4 = 12 \Rightarrow \boxed{f(-2) = 10}$$

$$f(5) = 5 - \sqrt{5+4} = 5 - \sqrt{9} = 5 - 3 = 2$$

$$\boxed{f(1) = 1 \times 1 + 3 = 4}$$

$$f(1) = 1 \times 1 + 3 = 4$$

$$\boxed{f(5) = 2}$$

$$\boxed{4+1=5}$$

$$f(n) = an^2 - bn + 2 \quad f(n-1) = a(n-1)^2 - b(n-1) + 2 =$$

$$a(n^2 - 2n + 1) - b(n-1) + 2 = an^2 - 2an + a - bn + b + 2$$

$$\begin{aligned} & \cancel{an^2} - 2an + a - \cancel{bn} + \cancel{b} - \cancel{an^2} + \cancel{bn} - \cancel{2} = 2n + 2 \Rightarrow -2an + a + b = 2n + 2 \\ & \Rightarrow a + b - 2 = 2n + 2an \quad a(-2n+1) + b = 2n + 2 \quad a + b = 2n(2+a) + 2 \Rightarrow \\ & a + b - 2b = 2n(2+a) + 2 - 2b \Rightarrow a - b = 2n(2+a) + 2 - 2b \end{aligned}$$

$$\frac{n^r + f_{n+\delta}}{n^r + f_{n+v}} = \frac{-(n-\delta)(n+1)}{n^r + f_{n+v}} \Rightarrow \frac{\cancel{(\sqrt{r}-1)^r} + f\sqrt{r}-1+\delta}{\cancel{(\sqrt{r}-1)^r} + f\sqrt{r}-1+v} = \frac{r}{s} = \frac{r}{r}$$

$$f\left(n - \frac{1}{n}\right) = \frac{n^r + 1}{n^r} = n^r + \frac{1}{n^r}$$

$$\boxed{n - \frac{1}{n} = t}$$

$$f(t) = n^r + \frac{1}{n^r} = \left(n - \frac{1}{n}\right)^r + r = t^r + r$$

$$f(t) = t^r + r \rightarrow f(-r) = (-r)^r + r = \textcircled{11}$$

$$F = (1, 0), (1, -1), (0, 1), (1, 1)$$

$$g(n) = \sqrt{4-n^2}$$

$$\frac{F}{g} = (1, 0), (1, -\sqrt{2}), (0, \frac{1}{\sqrt{2}})$$

$$\frac{g}{F} = (1, \frac{\sqrt{2}}{2}), (0, \frac{1}{\sqrt{2}})$$

$$rF(n) = (1, 1), (1, 2), (-1, 1), (1, -1)$$

$$rF(n) + 1 = (1, 2), (1, 3), (-1, 2), (1, 0)$$

$$rF(n) + 1 = (1, 3), (1, 4), (-1, 3), (1, 1)$$

$$rF(n) = (1, 1), (\frac{r}{r}, r), (-\frac{r}{r}, r), (\frac{1}{r}, -r)$$

$$F = (1, 1), (1, 2), (1, 3), (1, 4), (1, 5)$$

$$g = (1, 0), (1, 1), (-1, 1), (-1, -1), (1, -1)$$

$$F - g = (1, 1), (1, 2), (1, 3)$$

$$\frac{rF}{g} = (1, 4), (1, -1)$$