

$$a^2 + 2a = a^2 - 4 \rightarrow a = (-2) \quad -1$$

$$\frac{f+a}{c-b} = 2, \quad c+b = 3 \rightarrow b = (-1) \quad -2$$

$$\frac{f+a}{a} = 2 \rightarrow a = 1 \rightarrow f(x) = \frac{x+a}{x-2b} \quad f(1) = \frac{1+1}{1+1} = 2$$

$$\begin{cases} 2-a+b=0 \rightarrow 2+2a = 2-a \\ 2+2a+b=0 \rightarrow a = (-1) \rightarrow b = (-1) \end{cases} \quad -3$$

$$f(x) = \frac{f+1}{2x-4-1} \rightarrow f(1) = \frac{f+1}{2-1} = \frac{-2}{1}$$

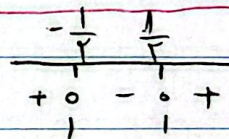
$$\begin{cases} a^2 + 4b = 0 \\ -f - a + b = 0 \end{cases} \xrightarrow{b = a+2} a^2 + 4a + 4 = 0 \rightarrow (a+2)^2 = 0 \quad -4$$

$$a = (-2) \rightarrow b = (-2)$$

$$a+b = (-4) \quad \leftarrow$$

$$\Delta < 0 \rightarrow m^2 - 4 < 0 \rightarrow (-2, 2) \text{ مخرج} \quad (5)$$

$$f - \frac{1}{2r} \geq 0 \rightarrow (-\infty, -\frac{1}{r}] \cup [\frac{1}{r}, +\infty)$$



$$mx^2 + 2mx + 1$$

$$m > 0$$

$$\Delta \leq 0 \rightarrow 4m^2 - 4m \leq 0 \rightarrow [0, 1] \text{ مخرج}$$

$$(x \text{ مخرج} \rightarrow y = 1 \checkmark)$$

$$\frac{rx-1}{rx-1}, x \neq a \rightarrow rx-1 \neq 0 \rightarrow x \neq \frac{1}{r} \rightarrow a = \frac{1}{r} \quad -1$$

$$x = \frac{1}{r} \rightarrow g\left(\frac{1}{r}\right) = r, f\left(\frac{1}{r}\right) = r+k \rightarrow r = r+k \rightarrow k = 0$$

$$\Rightarrow a+k = \frac{1}{r} + 0 = \frac{1}{r}$$

$$rx-r = rx+b \rightarrow b = (-r) \quad -9$$

$$x = -\frac{r}{r} \left\{ \begin{array}{l} f\left(-\frac{r}{r}\right) = -ra+r \\ g\left(-\frac{r}{r}\right) = (-c) \end{array} \right. \rightarrow -ra+r = -c \rightarrow a=r$$

$$\rightarrow a+b = r - (-r) = \underline{\underline{a}}$$

$$x = r+ \left\{ \begin{array}{l} f(r) = ra^r + ra \\ g(r) = f \end{array} \right. \rightarrow ra^r - ra = f \rightarrow a^r + a - r = 0$$

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

$$\underline{\underline{a = -r, 1}}$$