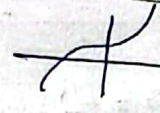


الف) $n^2 - n = 2 \rightarrow n = -1 \rightarrow \alpha$
 $\rightarrow n = 2 \rightarrow \beta \Rightarrow \{(-1, 2), (-1, 4), (2, 2)\}$ (خفاقي)
 $\rightarrow \textcircled{c}$

$\rightarrow m = 2 \Rightarrow \{(-1, 2), (1, 2), (2, 2), (a, 1), (a+2, n)\}$
 $a = 1 \Rightarrow \{(-1, 1), (1, 2), (2, 2), (1, n)\} \Rightarrow n = 2$

$a+1 \leq 2 \Rightarrow a \leq 1$

- 5

الف) $y = n^2 + 2 \rightarrow$  $\rightarrow y = \sqrt{n-2}$
 $\rightarrow$  $\rightarrow$ $y = \sqrt{n-2}$

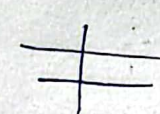
- 6

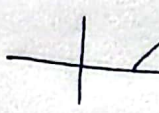
الف) $2g < 2 \Rightarrow a-1 < 2 \Rightarrow a < 3$

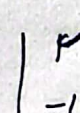
- 7

الف) $y = \frac{n+1}{n-2} \rightarrow f^{-1}(m) = \frac{2m+1}{m-2}$

- 8

$\rightarrow y = 2 \rightarrow$  $\rightarrow$ $y = 2$

الف) $y = n^2 + 2 \rightarrow$  $\rightarrow y = n^2 + 2$

$\rightarrow n^2 - 2n + 2 \rightarrow$  $\rightarrow$ $\frac{1}{-1} \rightarrow \frac{1}{2} \rightarrow \sqrt{n+1} + 2$
 $\rightarrow (-1)$

$n + \sqrt{n} \Rightarrow (\sqrt{n} - \frac{1}{\sqrt{n}})^2 - \frac{1}{4} = y \Rightarrow \sqrt{y + \frac{1}{4}} - \frac{1}{\sqrt{n}} = \sqrt{n}$
 $\Rightarrow y = n + \frac{1}{n} - \sqrt{n + \frac{1}{n}} \Rightarrow a = 1, b = \frac{1}{2}, c = -\frac{1}{2} \rightarrow \textcircled{1}$

$$\frac{n_1}{\sqrt{n_1^2 - r}} = \frac{n_2}{\sqrt{n_2^2 - r}} \quad \text{مقابلته} \quad n_1^2 = n_2^2 \Rightarrow n_1 = \pm n_2$$

الحال الثاني $n_1 = -n_2$

$$\begin{aligned} \leadsto y^r &= \frac{n^r}{n^r - r} \leadsto f^{-1}(n) = + \sqrt{\frac{r y^r}{n^r - 1}} \\ &= \frac{n \sqrt{r}}{\sqrt{n^r - 1}} \end{aligned}$$

$$\begin{aligned} \omega n &= -r + -r/n \Rightarrow n = -\frac{r}{\omega} \\ \sqrt{n} - 1 &= -\frac{r}{\omega} \Rightarrow n = \frac{r}{\omega} \end{aligned} \quad \left. \begin{array}{l} \\ \end{array} \right\} \Rightarrow \frac{r}{\omega} - \frac{r}{\omega} = -\frac{r}{\omega}$$

$$\begin{aligned} f^{-1}(n) &= n^r + 1 \Rightarrow r = n^r + 1 + \sqrt{n^r} \leadsto n = r \\ &\Rightarrow g^{-1}(1r) = r \end{aligned}$$