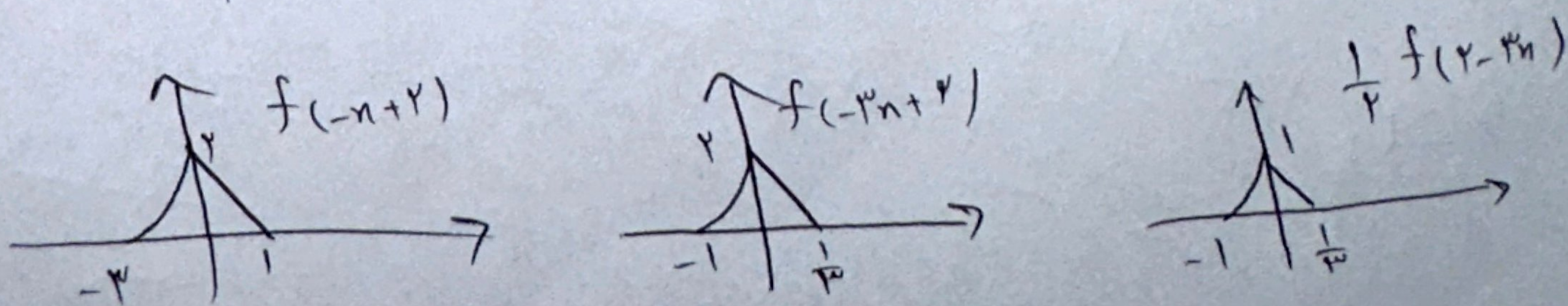
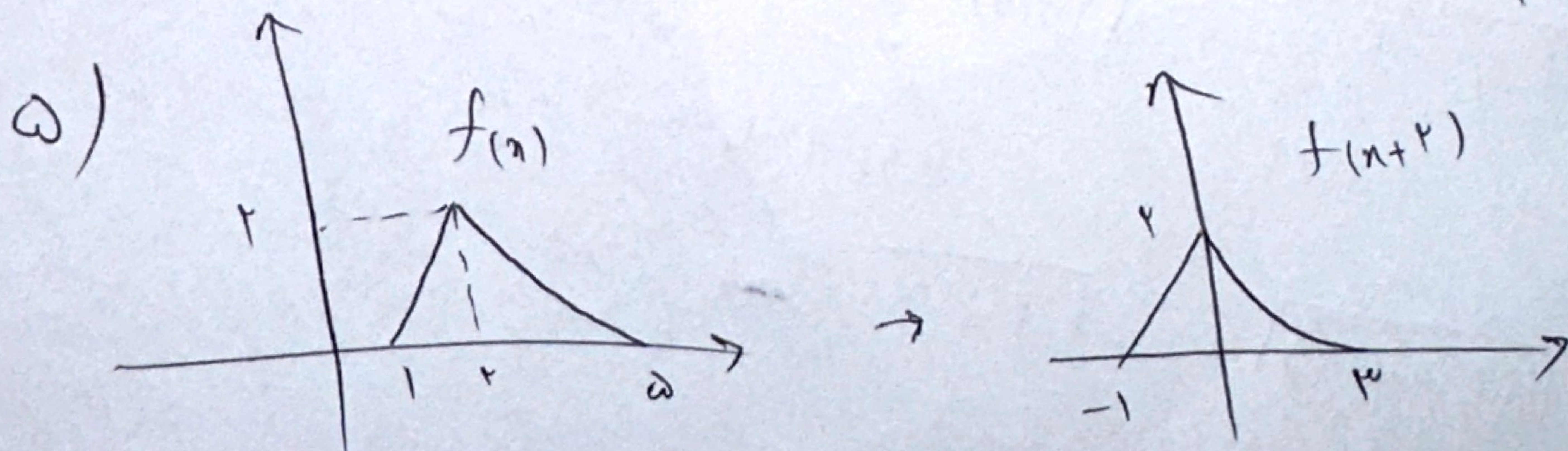
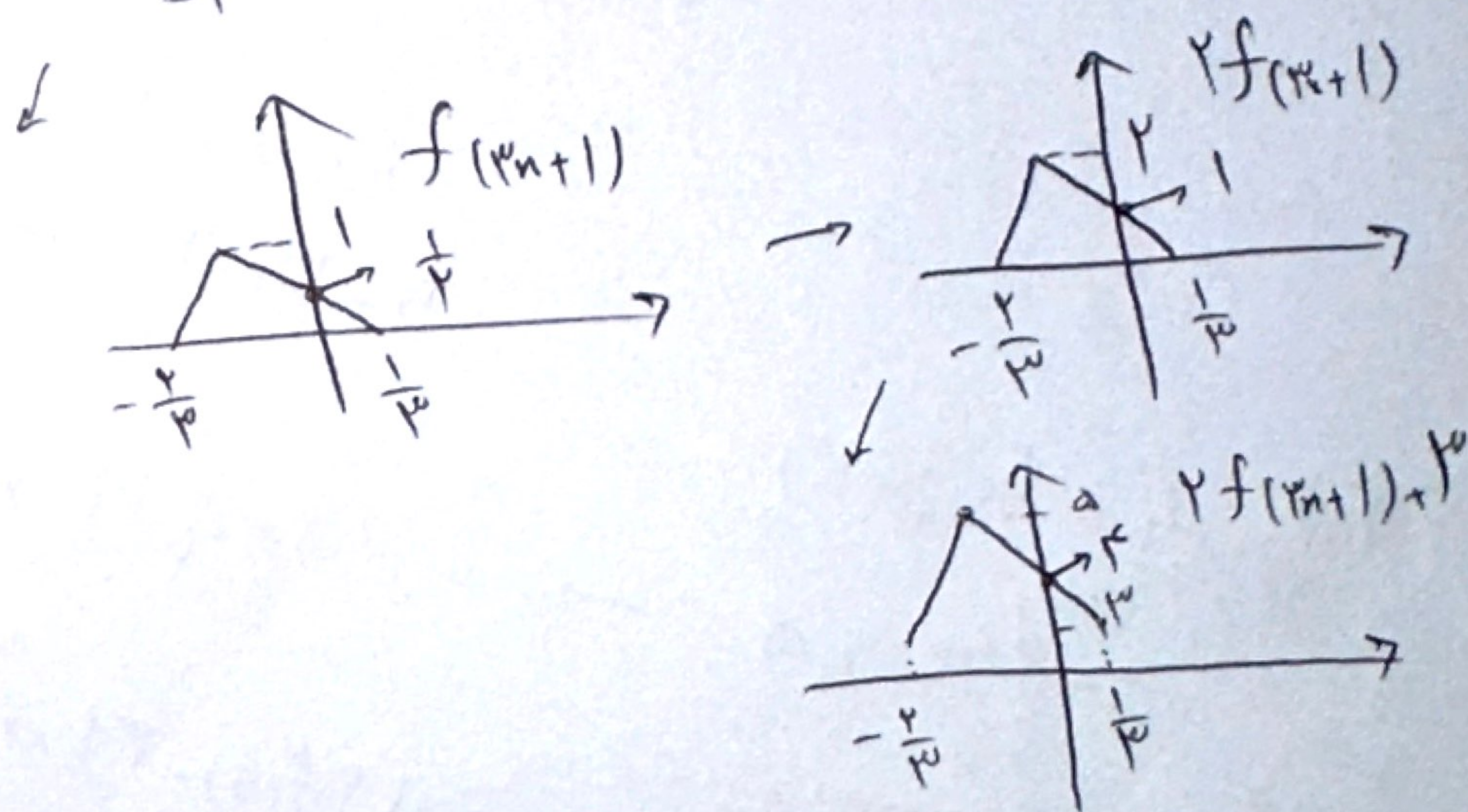
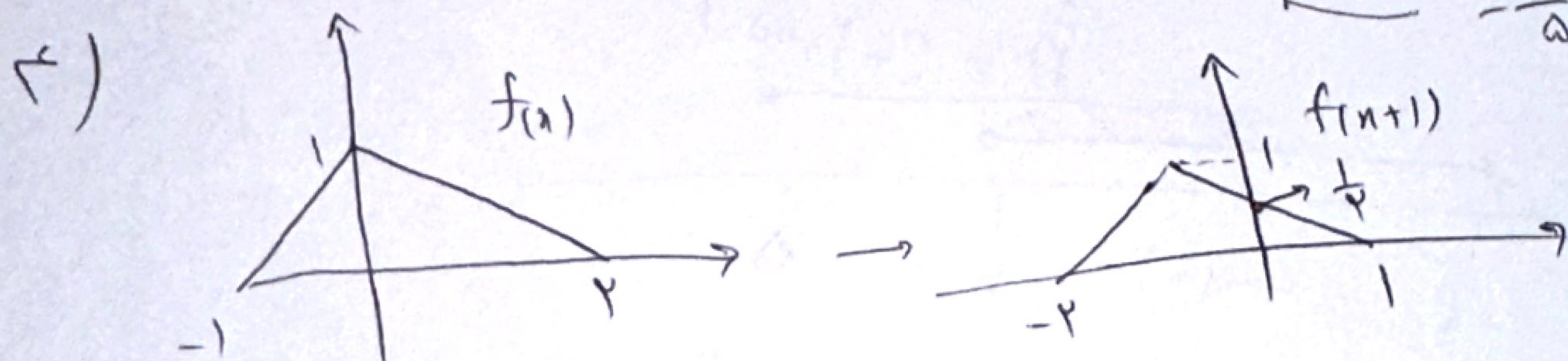


1) $D_{f(n)} = [-2, 5]$

$f\left(\frac{r_n+r}{\omega}\right) \rightarrow -2 \leq \frac{r_n+r}{\omega} \leq 5 \rightarrow -1 \leq r_n+r \leq 1$
 $-1 \leq r_n \leq 1$
 $-5 \leq n \leq 7 \rightarrow D_{f\left(\frac{r_n+r}{\omega}\right)} = [-5, 7]$

2) $D = [-2, 3] \xrightarrow{f(r_n-r)} -2 \leq r_n \leq 3$
 $-1 \leq r_n-r \leq 7 \rightarrow D_f = [-1, 7]$

3) $D = [-1, 3] \xrightarrow{f\left(\frac{r_n+1}{r}\right)} -1 \leq \frac{r_n+1}{r} < \omega \rightarrow D_{f(n)} = [-1, \omega)$
 $-1 \leq r-\omega n < \omega$
 $D_{f(r-\omega n)} = \left(-\frac{r}{\omega}, \frac{r}{\omega}\right] \rightarrow -\omega < \omega n-r \leq 1$
 $-\frac{r}{\omega} < n \leq \frac{r}{\omega}$

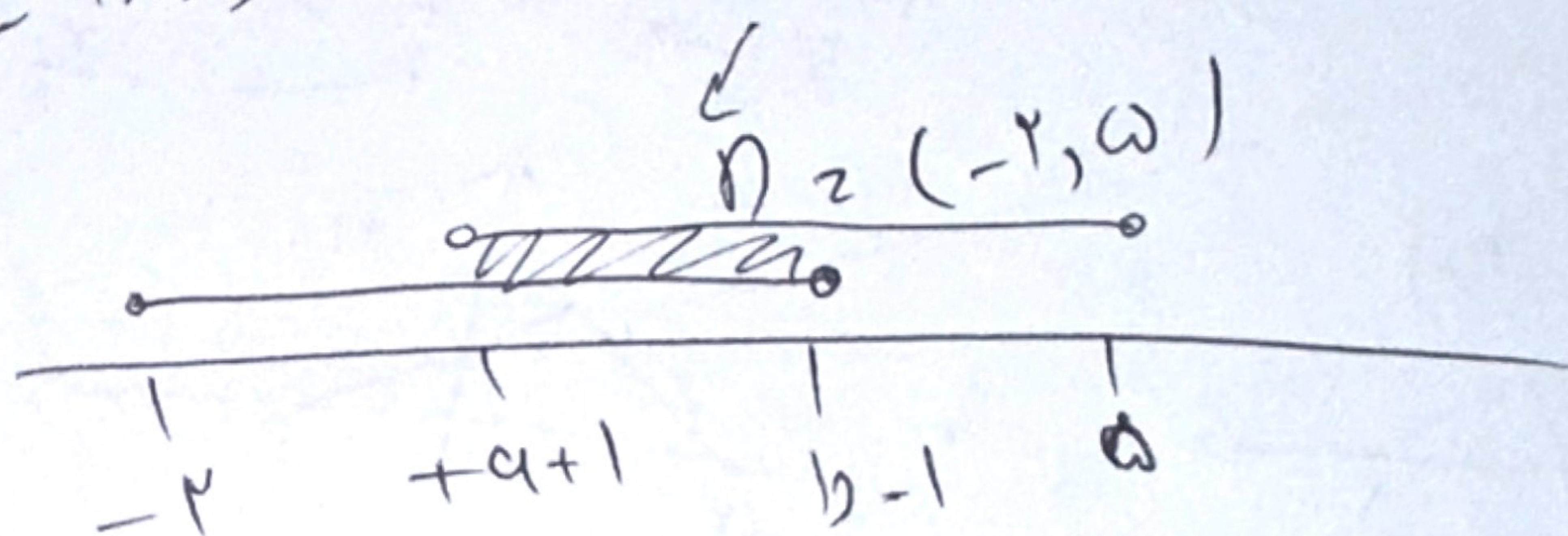


4) $g(n) = -\frac{1}{p}(n-r)^2 + p = 0 \rightarrow (n-r)^2 = 9$
 $\swarrow$
 $n-r = \pm 3 \rightarrow \frac{n = r}{n = 1}$

✓) $f(n) = -(n+1)(n-p)$

$\swarrow$
 $g = 1+p \left[+ \frac{(pn+p)(pn-1)}{pn^2+pn-p} \right] = 1pn^2 + 1pn - a$
 $\swarrow$
 $cat = \left(-\frac{1}{p}, -p \right) \rightarrow \frac{a = p}{p}$

1) $Df = (a, c]$ $Df_{(n-1)} = (a+1, \omega]$ $Dg_{(n+1)} = [-r, b-1]$
 $Dg = [-1, b)$ $\rightarrow g = f(n-1) + g(n+1)$



$1+a = -r \rightarrow a = -p \rightarrow a-b = -9$
 $b-1 = \omega \rightarrow b = 9$

9) $g_1 = f\left(\frac{n}{p}+1\right)$

$\swarrow$
 $-p \leq n \leq \omega \rightarrow -1/\omega \leq \frac{n}{p}+1 \leq 3/\omega$

$g_1 = \sqrt{|pf(n)-p|} \rightarrow |pf(n)-p| \geq 0$
 $\swarrow$
 $Dg_1 = [-1/\omega, 3/\omega]$

$f_{(n)} = f\left(\frac{n}{p}+1\right) = [-1, p]$

$\swarrow$
 $g_1 = \sqrt{|[-\omega, 1]|} = \sqrt{[0, \omega]} \Rightarrow R = [0, \sqrt{\omega}]$

10) $g(n) = \left| \frac{n-1}{pn-p} \right| + 1$
 $g(n) < 0 \rightarrow \frac{n+1}{pn-p} + \frac{n-1}{pn-p} < 0 \rightarrow \frac{2n}{pn-p} < 0$
 $\swarrow$
 $n+1 < 0 \rightarrow \frac{n-1}{pn-p} = \frac{n-1}{pn-p}$
 $n < -1 \rightarrow \frac{n-1}{pn-p} = \frac{n-1}{pn-p}$
 $\swarrow$
 $n < -p$