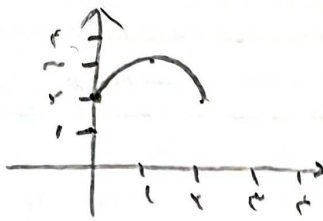
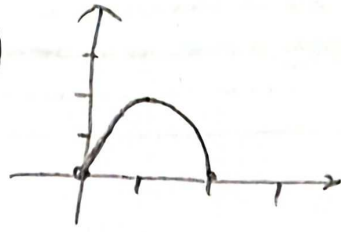


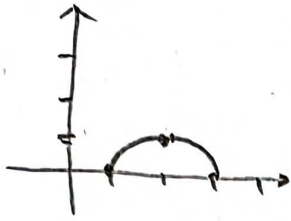
الف) $y = f(n+1)$



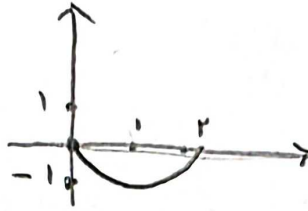
ب)



ج)



د)



الف) $n^2 - 5n + 6 > 0$ $(n-2)(n-3) > 0$ $\frac{-1}{+1} - \frac{6}{+1} + \frac{9}{+1}$ $D_f = \mathbb{R} - [-1, 6]$ (2)

ب) $n^2 - 6n + 5 < 0$ $(n-1)(n-5) < 0$ $\frac{+1}{+1} - \frac{5}{+1} + \frac{25}{+1}$ $D_f = (1, 5)$

ج) $(n+1)(n+5) \geq 0$ $\frac{-5}{+1} - \frac{-1}{+1} + \frac{1}{+1}$ $D_f = (-\infty, -5] \cup [-1, +\infty)$

د) $(n-1)(n-6) \leq 0$ $\frac{+1}{+1} - \frac{6}{+1} + \frac{36}{+1}$ $D_f = [1, 6]$

الف) $\frac{(n^2-2)(n-1)}{(n-5)} < 0$ $\frac{-1}{+1} + \frac{2}{+1} - \frac{5}{+1} + \frac{25}{+1}$ $D_f = (-\infty, 1) \cup (5, +\infty)$ (3)

ب) $\frac{(n-1)(n+1)}{(n-1)(n-5)} \geq 0$ $\frac{-1}{+1} - \frac{1}{+1} - \frac{5}{+1} + \frac{25}{+1}$ $D_f = (-\infty, -1] \cup (5, +\infty)$

الف) $y = \frac{\sqrt{n^2-1}}{\sqrt{n^2-n}} \Rightarrow n^2-1 \geq 0 \Rightarrow n^2 \geq 1 \Rightarrow n \geq 1$
 $n^2-n > 0 \Rightarrow n(n-1) > 0 \Rightarrow \frac{-1}{+1} - \frac{1}{+1} + \frac{1}{+1}$ $D_f = n > 1$ (4)

ب) $y = \frac{\sqrt{n^2-14}}{\sqrt{n^2-5n+6}} \Rightarrow (n-4)(n+4) \geq 0$ $\frac{-4}{+1} - \frac{4}{+1} + \frac{16}{+1}$ $D_f = (-\infty, -4] \cup (4, +\infty)$
 $(n-1)(n-6) > 0$ $\frac{-6}{+1} - \frac{-1}{+1} + \frac{1}{+1}$ $D_f = (-\infty, 1) \cup (6, +\infty)$

الف) $y = \sqrt{4-n} - \sqrt{2-n} \Rightarrow 4-n \geq 0 \Rightarrow n \leq 4$ $4-n \geq 0 \Rightarrow n \leq 4$ $2-n \geq 0 \Rightarrow n \leq 2$ $2-n \geq 0 \Rightarrow n \leq 2$ $-1 \leq n \leq 2$ (5)

ب) $y = \sqrt{2-n} - \sqrt{n-2} \Rightarrow n-2 \geq 0 \Rightarrow n \geq 2$ $2-n \geq 0 \Rightarrow n \leq 2$ $n-2 \geq 0 \Rightarrow n \geq 2$ $2-n \geq 0 \Rightarrow n \leq 2$ $2 \leq n \leq 2$ (6)

$$\text{الف) } \sqrt{r - rm^2} \quad |r - rm^2| \geq 0 \quad r - m^2 \geq 0 \quad -\sqrt{r} \leq m \leq \sqrt{r} \quad -9$$

$$m^2 \leq r \quad D_f = [-\sqrt{r}, \sqrt{r}]$$

$$\text{ب) } r|m| - 9 \geq 0 \quad r|m| \geq 9 \quad |m| \geq \frac{3}{\sqrt{r}} \quad D_f = (-\infty, -\frac{3}{\sqrt{r}}] \cup [\frac{3}{\sqrt{r}}, +\infty)$$

$$\text{الف) } y = \frac{\sqrt{|m|+1}}{\sqrt{|m|-r}} \Rightarrow |m|-r \neq 0 \quad |m| \neq r \quad D_f = \mathbb{R} - \{r, -r\} \quad -11$$

$$\text{ب) } m \geq 0, \sqrt{m-r} \neq 0 \quad m \neq r \quad D_f = \mathbb{R} - \{r\}$$

$$\text{الف) } \frac{\sin m}{r \cos m - 1} \quad r \cos m - 1 \neq 0 \quad \cos m \neq \frac{1}{r} \quad -12$$

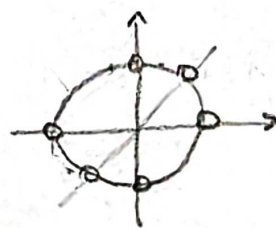
$$D_f = \mathbb{R} - \left\{ rK\pi - \frac{\pi}{2}, rK\pi + \frac{\pi}{2} \right\}$$

$$\text{ب) } r \sin m + 1 \neq 0 \quad \sin m \neq -\frac{1}{r} \quad D_f = \mathbb{R} - \left\{ rK\pi - \frac{\pi}{4}, rK\pi + \frac{\pi}{4} \right\}$$

$$\text{ج) } \frac{\sin m + r}{\cos m - r} \quad \cos m \neq 0 \quad \mathbb{R} - \left\{ K\pi + \frac{\pi}{2} \right\}$$

$$\frac{\cos m + r}{\sin m} \quad \sin m \neq 0, \cot m \neq -\frac{r}{1}$$

$$D_f = \mathbb{R} - \left\{ K\pi, K\pi + \frac{\pi}{2}, K\pi + \frac{\pi}{r} \right\}$$



$$\text{د) } r \sin^2 m - r \neq 0 \quad r \sin^2 m \neq r \quad \sin^2 m \neq \frac{r}{r} \quad \sin m \neq \pm \frac{\sqrt{r}}{r}$$

$$D_f = \mathbb{R} - \left\{ rK\pi + \frac{\pi}{2}, rK\pi + \frac{3\pi}{2} \right\}$$

$$r|m-r| - \frac{1}{r} > 0 \quad r|m-r| > \frac{1}{r} \quad |m-r| > \frac{1}{r^2} \quad -13$$

$$m-r > \frac{1}{r^2} \quad -m+r > \frac{1}{r^2} \quad D_f = (-\infty, 1, \frac{1}{r^2}) \cup (r, \frac{1}{r^2}, +\infty)$$

$$\text{هـ) } r - r|m| \geq 0 \quad r|m| \leq r \quad |m| \leq 1 \quad D_f = [-1, 1] \quad (14)$$

$$\text{و) } \frac{\sqrt{|m|}}{\sqrt{|m|}} \Rightarrow |m| \geq 0 \quad |m| > 0 \quad D_f = \mathbb{R} - \{0\}$$