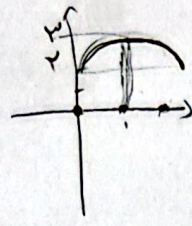
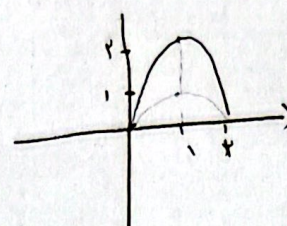
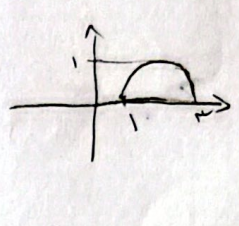
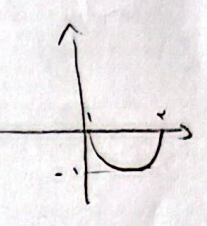


1  (a-2)(a-3)	2  (a-1)(a-5)	3  (a+1)(a-5)	4  (a+1)(a-5)
الف = (a-2)(a-3) > 0 => ب = (a-1)(a-5) > 0 => ج = (a+1)(a-5) > 0 => د => (a-1)(a-5) > 0 =>	الف = (a-2)(a-3) > 0 => ب = (a-1)(a-5) > 0 => ج = (a+1)(a-5) > 0 => د => (a-1)(a-5) > 0 =>	الف = (a-2)(a-3) > 0 => ب = (a-1)(a-5) > 0 => ج = (a+1)(a-5) > 0 => د => (a-1)(a-5) > 0 =>	الف = (a-2)(a-3) > 0 => ب = (a-1)(a-5) > 0 => ج = (a+1)(a-5) > 0 => د => (a-1)(a-5) > 0 =>
الف = (a-1)(a-2) > 0 => ب = (a-1)(a+1) > 0 =>	الف = (a-1)(a-2) > 0 => ب = (a-1)(a+1) > 0 =>	الف = (a-1)(a-2) > 0 => ب = (a-1)(a+1) > 0 =>	الف = (a-1)(a-2) > 0 => ب = (a-1)(a+1) > 0 =>
الف = (a^3-1)/(a^3-a) > 0 => ب = (a^2-1)/(a^2-5a+4) > 0 =>	الف = (a^3-1)/(a^3-a) > 0 => ب = (a^2-1)/(a^2-5a+4) > 0 =>	الف = (a^3-1)/(a^3-a) > 0 => ب = (a^2-1)/(a^2-5a+4) > 0 =>	الف = (a^3-1)/(a^3-a) > 0 => ب = (a^2-1)/(a^2-5a+4) > 0 =>
الف = 1) 2-a > 0 => a < 2 ب => 2-sqrt(2-a) > 0 => sqrt(2-a) < 2 => 2-a < 4 => -a < 2 => a > -2 ج => 2-sqrt(a-2) > 0 => 2 > sqrt(a-2) => 4 > a-2 => a < 6	الف = 1) 2-a > 0 => a < 2 ب => 2-sqrt(2-a) > 0 => sqrt(2-a) < 2 => 2-a < 4 => -a < 2 => a > -2 ج => 2-sqrt(a-2) > 0 => 2 > sqrt(a-2) => 4 > a-2 => a < 6	الف = 1) 2-a > 0 => a < 2 ب => 2-sqrt(2-a) > 0 => sqrt(2-a) < 2 => 2-a < 4 => -a < 2 => a > -2 ج => 2-sqrt(a-2) > 0 => 2 > sqrt(a-2) => 4 > a-2 => a < 6	الف = 1) 2-a > 0 => a < 2 ب => 2-sqrt(2-a) > 0 => sqrt(2-a) < 2 => 2-a < 4 => -a < 2 => a > -2 ج => 2-sqrt(a-2) > 0 => 2 > sqrt(a-2) => 4 > a-2 => a < 6

$$\cos x = \frac{x - 2\cos^2 x}{2} > 0 \Rightarrow 2\cos^2 x \leq x \Rightarrow \cos^2 x \leq \frac{x}{2} \Rightarrow \cos x \leq \sqrt{\frac{x}{2}} \Rightarrow (-\infty, \sqrt{\frac{x}{2}}]$$

$$-\sqrt{\frac{x}{2}} \leq \cos x \leq \sqrt{\frac{x}{2}}$$

1.5

$$y = 3|a| - 9 > 0 \Rightarrow 3|a| > 9 \Rightarrow |a| > 3 \Rightarrow [3, +\infty) \cup (-\infty, -3)$$

$$(-\infty, -3]$$

$$\text{الف} \Rightarrow |a| - 3 \neq 0 \Rightarrow |a| \neq 3 \Rightarrow \mathbb{R} - \{\pm 3\}$$

$$ب \Rightarrow ① \Rightarrow a \geq 0 \quad (2) \quad \checkmark$$

$$② = \sqrt{a} - 3 \neq 0 \Rightarrow \sqrt{a} \neq 3 \Rightarrow a \neq 9 \quad \left. \vphantom{\sqrt{a} - 3 \neq 0} \right\} [0, +\infty) - 9$$

$$\text{الف} \Rightarrow 2\cos a - 1 \neq 0 \Rightarrow 2\cos a \neq 1 \Rightarrow \cos a \neq \frac{1}{2} \Rightarrow \mathbb{R} - \left[2k\pi \pm \frac{\pi}{3}\right]$$

باين صفة نجيب

$$ب \Rightarrow 2\sin a + 1 \neq 0 \Rightarrow \sin a \neq -\frac{1}{2} \Rightarrow \mathbb{R} - \left[3\pi + \frac{4\pi}{3}, 3\pi + \frac{2\pi}{3}\right]$$

$$ج \Rightarrow ① + \frac{\sin}{\cos} \Rightarrow \cos \neq 0 \Rightarrow \left\{k\pi + \frac{\pi}{2}\right\}$$

$$② \Rightarrow \cot a - 1 \neq 0 \Rightarrow \cot a \neq 1 \Rightarrow \left\{k\pi + \frac{\pi}{4}, k\pi\right\}$$

$$د \Rightarrow 2\sin^2 a - 3 \neq 0 \Rightarrow \sin^2 a \neq \frac{3}{2} \Rightarrow \sin a \neq \pm \sqrt{\frac{3}{2}} \Rightarrow \mathbb{R} - \left[2k\pi \pm \frac{\pi}{2}\right]$$

$$2|m-1| - \frac{1}{5} > 0 \Rightarrow |m-1| > \frac{1}{10} \Rightarrow$$

$$m-1 > \frac{1}{10} \Rightarrow m > \frac{1}{10} + 1 \Rightarrow m > \frac{11}{10}$$

$$m-1 < -\frac{1}{10} \Rightarrow m < -\frac{1}{10} + 1 \Rightarrow m < \frac{9}{10}$$

$$(-\infty, \frac{9}{10}] \cup [\frac{11}{10}, +\infty)$$

$$\text{الف} = 5 - 2|m| > 0 \quad 2|m| \leq 5 \Rightarrow |m| \leq \frac{5}{2} \Rightarrow m \leq \frac{5}{2}, m \geq -\frac{5}{2}$$

$$[-\frac{5}{2}, \frac{5}{2}]$$

$$ب \Rightarrow \sqrt{|a|} \rightarrow \mathbb{R}$$

$$\sqrt{|a|} \rightarrow |a| > 0 = \mathbb{R} - \{0\}$$

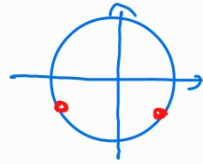
$$C \sin \theta \neq \frac{1}{r} \rightarrow$$



$$\rightarrow D_y = R - \{2\kappa\pi \pm \frac{\pi}{4}\}$$

١- الف

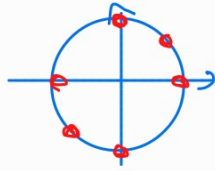
$$\sin \theta \neq -\frac{1}{r}$$



$$\rightarrow D_y = R - \{2\kappa\pi - \frac{\pi}{4}, 2\kappa\pi + \frac{\pi}{4}\}$$

ب

$$\begin{cases} C \cdot \tan \theta \neq 1 \\ C \cdot \sin \theta \neq 0 \\ \sin \theta \neq 0 \end{cases}$$



$$\rightarrow D_y = R - \{\frac{\kappa\pi}{r}, \kappa\pi + \frac{\pi}{r}\}$$

ج

$$\sin^2 \theta \neq \frac{r}{\epsilon} \rightarrow$$

$$\sin \theta \neq \pm \sqrt{\frac{r}{\epsilon}} \rightarrow$$



$$D_y = \{\kappa\pi \pm \frac{\pi}{r}\}$$

د