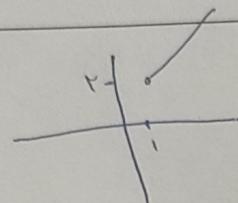
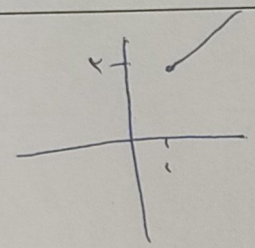
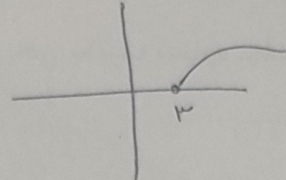


(الف) $(m, 3) = (2, 3) \rightarrow m=2$ $(a, 1) = (-1, 1) \rightarrow a=-1$ $(1, n) = (1, 2) \rightarrow n=2$	(ب) $(m, 3) = (2, 3) \rightarrow m=3$ $(3, 2) = (2, n) \rightarrow n^2 - n = 2 \rightarrow \begin{cases} n=2 \\ n=-1 \end{cases}$ نقطه $n=-1$
	$x=a < 2$ $1+a < 2$ $a < 1$
	$a-1 < 2$ $a < 3$ $0 < a < 3$ $a > 0 \rightarrow$ سه نقطه صفر یا منفی شود
$y = x^2 - 4x + 6 = 2$ $y = (x-2)^2 - 2$ $x-2 = \pm \sqrt{y+2}$ $x = 2 \pm \sqrt{y+2}$ یک به یک است	(الف) $y_1 = x_1^2 - 2$ $y_2 = y_1 \rightarrow x_1^2 + 2 = x_2^2 + 2 \rightarrow x_1 = x_2$ $y_2 = x_2^2 - 2$ یک به یک است $x = y^2 + 2 \rightarrow y^2 = x - 2 \rightarrow y = \pm \sqrt{x-2}$
$g(x, 2y) = 4 + 2x$ $n(y, 2) = 4 - 2y$ $x = \frac{2y-4}{2-y}$ هوکراسند است - یک به یک است	(الف) $g(x, 2y) = 3x + 1$ $n(y, 3) = 2y + 1$ $n = \frac{2y+1}{y-3}$ یک به یک است - هوکراسند $y = \frac{2x+1}{x-3}$

$x = \frac{-b}{a} = \frac{-\epsilon}{1} = -\epsilon$ مطلوب
 $y = x^2 - \epsilon x + \epsilon \rightarrow y = (-\epsilon)^2 - 1 \rightarrow x = (y+1)^2 - 1$
 $x+1 = (y+1)^2 \rightarrow \sqrt{x+1} = y+1 \rightarrow \sqrt{x+1} + 1 = y$
 $x = \sqrt{y-1}$ $x^2 = y-1$ $y = x^2 + 1$ $x \geq 0$

(الف)  مطلوب

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$y = x + \sqrt{x + \frac{1}{x}} - \frac{1}{x} \rightarrow (\sqrt{x + \frac{1}{x}})^2 - \frac{1}{x} = y \rightarrow y + \frac{1}{x} = (\sqrt{x + \frac{1}{x}})^2 \rightarrow \sqrt{y + \frac{1}{x}} = \sqrt{x + \frac{1}{x}}$
 $\sqrt{x} = \sqrt{y + \frac{1}{x}} - \frac{1}{x} \rightarrow x = y + \frac{1}{x} - \sqrt{y + \frac{1}{x}} + \frac{1}{x} \rightarrow x = y - \sqrt{y + \frac{1}{x}} + \frac{1}{x} \rightarrow y = x - \sqrt{x + \frac{1}{x}} + \frac{1}{x}$
 $a + b - \sqrt{x - c} = x + \frac{1}{x} - \sqrt{x + \frac{1}{x}}$
 $a = 1$ $b = \frac{1}{x}$ $c = -\frac{1}{x}$ $a + b + c = 1$

1, NO

$y = y^2 \rightarrow \frac{x^2}{x^2-1} = \frac{x^2}{x^2-1} \rightarrow x^2 - 2x^2 = x^2 - 2x^2 \rightarrow x = 0$ مطلوب
 $x = \frac{y}{\sqrt{y^2-1}} \rightarrow x^2 = \frac{y^2}{y^2-1} \rightarrow y^2 x^2 - x^2 = y^2$ $y = \frac{x^2}{x^2-1} \rightarrow y = \pm \sqrt{\frac{x^2}{x^2-1}} \rightarrow y = \frac{\sqrt{x}}{\sqrt{x^2-1}}$

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$f(x) = \frac{x}{1-x} \rightarrow y = \frac{x}{1-x} \rightarrow x = \frac{y}{1+y} \rightarrow y = \frac{x}{1-x} \rightarrow y = \frac{\frac{y}{1+y}}{1 - \frac{y}{1+y}} = \frac{y}{1+y} = \frac{y}{1+y}$
 $y(x) = \sqrt{x-1} \rightarrow x = \sqrt{y-1} \rightarrow y = (x+1)^2 \rightarrow y = (1 + \frac{1}{x})^2 = \frac{9}{x^2}$ $1(-\frac{1}{x}) + y(\frac{1}{x}) = \frac{9}{x^2} - \frac{1}{x} = \frac{1}{x^2}$

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$f(x) = \sqrt{x+1} \rightarrow y = \sqrt{x+1} \rightarrow y^2 = x+1 \rightarrow x = y^2 - 1 \rightarrow y = \sqrt{x+1}$ $f(x) = x^2 + 1$
 $f(x) = \sqrt{f(x)} = 14$ $\begin{cases} \sqrt{f(x)} = 14 \rightarrow f(x) = 196 \\ \sqrt{f(x)} = -5 \end{cases}$
 $x^2 + 1 = 9 \rightarrow x^2 = 8 \rightarrow \sqrt{x^2} = \sqrt{8} = 2\sqrt{2}$

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