

11, 12

Year: _____ Month: _____ Date: _____ ()

Subject: تسریع الاما علی

$$y = \frac{x+r}{x^2-rx} \rightarrow x^2-rx = x(x-r) \neq 0 \rightarrow x \neq 0, x \neq r \quad D = \mathbb{R} \setminus \{0, r\}$$

(11, 12)

$$y = \frac{x+r}{x^2-4x+4} \rightarrow \Delta = (4)^2 - 4 \times 1 \times 4 = 16 - 16 = 0 < 0 \quad D = \mathbb{R} \quad 0, 12$$

$$y = \frac{x+r}{x^2+x+r} \rightarrow \Delta = 1^2 - 4 \times 1 \times r = 1 - 4r < 0 \quad D = \mathbb{R} \quad 0, 12$$

$$y = \frac{x+r}{x^2-rx^2} \rightarrow x^2(x^2-r) = x^2(x-r)(x+r) \rightarrow \begin{matrix} x \neq 0 \\ x \neq r \\ x \neq -r \end{matrix} \quad D = \mathbb{R} \setminus \{0, \pm r\} \quad 0, 12$$

$$y = \frac{\sqrt{x}}{x} \rightarrow \sqrt{x} \geq 0 \quad x \geq 0 \quad x \neq 0 \quad D = (0, +\infty)$$

(1)

$$y = \frac{x^2+1}{x^2+1} \rightarrow x^2+1 \neq 0 \rightarrow D = \mathbb{R} \quad 0, 12$$

$$y = \frac{\sqrt{x-r}}{x-r} \rightarrow \begin{matrix} x-r \geq 0 \\ x-r > 0 \end{matrix} \rightarrow \begin{matrix} x \geq r \\ x > r \end{matrix} \rightarrow D = (r, +\infty)$$

$$y = \frac{rx+r}{|x|+x^2} \rightarrow \begin{matrix} |x|+x^2 \neq 0 \\ |x| \neq 0 \end{matrix} \rightarrow D = \mathbb{R} \quad [r, +\infty)$$

$$y = |x|+r$$

$$y = |x| \rightarrow \text{شال 12}$$

(1)

$$y = r|x|$$

$$y = |x+r|$$

$$y = |x+r|+r$$

$$f(x) = \text{graph}$$

سوال ۵:

۵, ۲۵

$$f(x) + r = \text{graph}$$

$$r f(x) = \text{graph}$$

$$f(x-1) = \text{graph}$$

$$-f(x) = \text{graph}$$

$$y = (x-r)(x-r)(x-r) \quad x \mid \begin{array}{cccc} r & r & r & \\ -r & + & -r & + \end{array} \quad \underline{1}$$

سوال ۶:

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$$y = (x-r)(x-r)'(x-r) \quad x \mid \begin{array}{cccc} r & r & r & \\ + & -r & -r & + \end{array} \quad \underline{1}$$

$$y = \frac{(x-r)(x-r)}{x-r} \quad x \mid \begin{array}{cccc} r & r & r & \\ -r & + & -r & + \end{array}$$

سوال ۷:

۳

$$y = \frac{(x-r)(x-r)}{(x-r)'} \quad x \mid \begin{array}{cccc} r & r & r & \\ + & -r & -r & + \end{array}$$

سوال ۸:

۱

$$y = \frac{x^2 - rx + r}{x-r} \rightarrow \text{graph} \quad x \mid \begin{array}{cccc} r & r & r & \\ -r & + & -r & + \end{array}$$

$$y = \frac{x^2 - rx + r}{x^2 - rx + r} \rightarrow \frac{(x-1)(x-r)}{(x-1)(x-r)} + \frac{r}{x-r} + \frac{r}{x-r} + \underline{1}$$

سوال ۹:

۵, ۲۵

$$y = \frac{x^2 - x^2}{x^2 + x + r} \rightarrow \frac{(x^2 + x)(x^2 - x)}{x^2 + x + r} \quad x \mid \begin{array}{cccc} -1 & 0 & 1 & \\ -r & + & -r & + \end{array}$$

$$\Delta = b^2 - 4ac = x^2 - 4 \left(\frac{x^2 + x}{x^2 + x + r} \right) = x^2 - 4x^2 - 4x = -3x^2 - 4x$$

$$y = \frac{x^2 + rx + r}{x^2 + rx + r} \rightarrow \text{graph} \quad x \mid \begin{array}{cccc} r & r & r & \\ + & -r & -r & + \end{array}$$

$$y = \sqrt{\frac{x^r - 1}{x^r - x}} \rightarrow \frac{x^r - 1}{x^r - x} \rightarrow x^r \neq x$$

(وال 10)

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$$y = \sqrt{\frac{x^r - 1}{x^r - x}} \rightarrow \frac{x^r - 1}{x^r - x} \rightarrow x^r \neq x$$

$$(x-1)(x-5) \neq 0$$

$$\frac{x^r - 1}{x^r - x} \rightarrow x^r \neq x$$

$$y^r - x = x^r \Rightarrow y^r = x + x^r \rightarrow y = \sqrt{x + x^r}$$

تابع است ✓

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$$|y| + x^r = x + r \rightarrow |y| = x + r - x^r \rightarrow y = \pm (x + r - x^r)$$

$$\sqrt{x-5} + |y-2| = 0 \rightarrow \sqrt{x-5} = 0 \rightarrow x = 5$$

تابع است ✓

$$\rightarrow |y-2| = 0 \rightarrow y = 2$$

$$x = \cos y$$

✓

در نظر داشته باشید که برای هر y در بازه $[-\frac{\pi}{2}, \frac{\pi}{2}]$ یک x در بازه $[0, 1]$ وجود دارد.