

۱۹,۵ نفر

نام و نام خانوادگی: کوشش پاسخنامه تشریحی تکلیف شماره کلاس: یازدهم دبیرستان B

B

الف) $6x^2 - 5x - 6 = 0 \rightarrow x^2 - 5x - 6 = 0 \rightarrow (x-9)(x+1) \rightarrow \frac{9}{6}, \frac{-1}{6} \rightarrow \frac{3}{2}, -\frac{1}{6}$

ب) $3x^2 - 11x - 3 = 0 \rightarrow x^2 - 11x - 9 = 0 \rightarrow (x-9)(x+1) \rightarrow \frac{9}{3}, \frac{-1}{3} \rightarrow 3, -\frac{1}{3}$

ج) $4x^2 - 12x - 3 = 0 \rightarrow x^2 - 3x - \frac{3}{4} = 0 \rightarrow (x-\frac{5}{2})(x+\frac{1}{2}) \rightarrow \frac{5}{2}, -\frac{1}{2} \rightarrow \frac{5}{2}, -\frac{1}{2}$

د) $2x^2 - 5x - 12 = 0 \rightarrow x^2 - 5x - 6 = 0 \rightarrow (x-9)(x+1) \rightarrow \frac{9}{2}, \frac{-1}{2} \rightarrow \frac{9}{2}, -\frac{1}{2}$

الف) $x^2 - 5x - 14 = 0 \rightarrow (x-7)(x+2) \rightarrow 7, -2 = x_1, x_2$

ب) $2x^2 + 5x + 3 = 0 \rightarrow x^2 + 5x + 6 = 0 \rightarrow (x+2)(x+3) \rightarrow -2, -3 = x_1, x_2$

ج) $x^2 + 2x + 2 = 0 \rightarrow B^2 - 4ac = 4 - 8 = -4 < 0$ (دارد) $\rightarrow$ (د)

د) $3x^2 + 2x - 2 = 0 \rightarrow x^2 + \frac{2}{3}x - \frac{2}{3} = 0 \rightarrow \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \rightarrow \frac{-\frac{2}{3} \pm \sqrt{\frac{4}{9} + \frac{8}{3}}}{2} \rightarrow \frac{-\frac{2}{3} \pm \sqrt{\frac{28}{9}}}{2} \rightarrow \frac{-\frac{2}{3} \pm \frac{2\sqrt{7}}{3}}{2} \rightarrow \frac{-1 \pm \sqrt{7}}{3}$

$A \times B - B^2 \rightarrow (1,2)(1,3)(2,2)(2,3)(3,2)(3,3) - (2,2)(2,3)(3,2)(3,3)$

$\{(1,2), (1,3)\}$ (د)

آلوده یادت زره!

$f(x) = \{(1, m^2), (2, 1), (-3, m), (-2, m), (3, m+2), (m, 2)\}$ $m+2 = m^2 \rightarrow m^2 - m - 2 = 0$
 $m = -1$ (د) $(2, 1) (2, 2) \leftarrow$ غ ق $m = 2$ $m_{1,2} = 2, 1 \leftarrow (m-2)(m+1)$

$g(x) = \{(3, m^2), (2, 1), (m, 2), (3, m+2), (-2, m), (-1, 3)\}$ $m+2 = m^2 \rightarrow (m-2)(m+1)$
 $m = 2$ (د) $(-1, 3) (-1, 2) \leftarrow$ غ ق $m = -1$ $m_{1,2} = 2, -1$

$f(x) = \{(1, a^2), (1, 3a-2), (a^2, 3a+2)\}$

$a^2 = 3a - 2 \rightarrow 1a^2 - 3a + 2 = 0$
 $a_{1,2} = 1, 2$

$a = 1 \rightarrow (1, 1) (1, 1) (1, 5)$ خ ق ق

$a = 2 \rightarrow (1, 4) (1, 4) (4, 14)$ ✓

$a = 2$

$x^2 - 1 \quad x \leq 1 \quad 1 \rightarrow 0$ $ax + b \quad 1 \leq x \leq 2$ $x^3 \quad x > 2 \quad 2 \rightarrow 1$	$ax + b \xrightarrow{x=1} a + b = 0$ $ax + b \xrightarrow{x=2} 2a + b = 1$ $a = 1 \quad b = -1$	6
$2x - 3 \quad x \geq k \quad 2x - 3 \xrightarrow{x=k} 2k - 3$ $f = 3x \quad x \leq k \quad f = 3x \xrightarrow{x=k} 3k$	$2k - 3 = 3 - 3k$ $5k = 6$ $k = \frac{6}{5}$	7
$x^2 - 6y = x^2 - 3x + 3 \Rightarrow x \rightarrow 1 \quad y^2 - 6y = 0 \quad y(y - 6)$ $ x + y = 3 \quad x = 0 \quad y = 3 \quad y = \pm 3$ $ y = \sqrt{1 - \cos x} \quad x = \frac{\pi}{2} \quad y = 1 \quad y = \pm 1$	$x = -1 \quad (-1, 0) \quad y^2 = 0 \quad y = 0$ $y^2 + (x+1)^2 = 0$	8
$\sqrt[3]{y} + x^2 = 2x - 2$ $y^3 + 2y = 5x$	$\sqrt[3]{y_1} + x_1^2 = 2x_1 - 2$ $\sqrt[3]{y_2} + x_2^2 = 2x_2 - 2$ $x_1 = x_2 \rightarrow y_1^3 + 2y_1 = 5x_1$ $y_1^3 + 2y_1 = 5x_2$ $(y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2) + 2(y_1 - y_2) = 0$ $(y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2 + 2) = 0$	9
$x \sin y = y \sin x \quad x = 0 \quad 0 \times \sin y = y \times \sin 0 \quad 0 = 0$ $\sqrt{\frac{x}{y}} + \sqrt{\frac{y}{x}} = 2$	$\sqrt{\frac{x}{y}} = a \rightarrow a + \frac{1}{a} = 2 \quad \times a \quad a = 1$ $a^2 + 1 = 2a \quad a^2 - 2a + 1 = (a-1)^2 = 0$	10

$$\text{ج-۴) } (3, m^2) \text{ و } (3, m+2) \leadsto m^2 = m+2 \leadsto m^2 - m - 2 = 0.$$

$$m=2 \rightarrow (2, 1) \text{ و } (2, 4) \times$$

$$m=-1 \rightarrow (-1, 4) (-1, 1) \times$$

بنابراین هیچ مقدار m عبارت تانژانت!