

$$a = 3x - 9$$

$$y = 3x - 9$$

$$x + 2y = -5$$

$$2x + 5 = -2y$$

$$x + 5 = -2(3x - 9)$$

$$2x + 5 = -6x + 18$$

$$\frac{2}{-8}$$

$$2x = 13$$

$$x = 6.5 \quad y = -11.5$$

$$1) \quad \frac{1}{x} - \frac{1}{y} = -1 \quad -\frac{a}{x} + \frac{a}{y} = a$$

$$\frac{-2}{y} = 2$$

$$y = -1$$

$$\frac{a}{x} - \frac{1}{y} = -2 \quad \frac{a}{x} - \frac{1}{-1} = -2$$

$$\frac{a}{x} - \frac{1}{-1} = -2$$

$$\frac{a}{x} + 1 = -2$$

$$\frac{a}{x} = -3$$

$$-1 \cdot x = a$$

$$x = \frac{a}{-1} = \frac{-1}{2}$$

$$f(a) + 2f(2) = 3f(1)$$

$$2a + 2b = -6$$

$$-4 + 2b = -6$$

$$a + 1 = -2$$

$$a = -3$$

✓ 12

~~12~~
~~12~~

$$m^2 - 3m = -2$$

~~12~~

$$m^2 - 3m + 2 = 0 \quad m=1, 2 \text{ و } 2$$

در هر صورت این تابع نفعی

$$(m-1)(m-2)$$

$$m=2 \rightarrow \dots$$

~~1~~

2

12
5

شبه
با قطب

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الف) $y = -\sqrt{x+1}$



تابع

ب) $x = \frac{y}{1-y^2}$

$$y_1^3 + y_1 y_2^2 + y_2 y_1^2 = y_1^3 + y_1 y_2^2 + y_2 y_1^2$$

$$(y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2) + y_2(y_1 - y_2)(y_1 + y_2)$$

$$- y_2(y_1 - y_2)$$

$$(y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2 + y_2 y_1 + y_2^2)$$

(6)

الف) $|y| = x$

مقال تقوى

$y = 1 \rightarrow x = 1$
 $y = -1 \rightarrow x = 1$

~~الف~~ $\frac{x^2 + \epsilon x + \epsilon + 1}{x^2 + \epsilon x + \epsilon + 3} = \frac{(x+2)^2 + 1}{(x+2)^2 + 3}$ $f(\sqrt{x-2}) = \frac{(\sqrt{x-2} + 2)^2 + 1}{(\sqrt{x-2} + 2 - 2)^2 + 3} = \frac{1}{3}$

~~$\frac{-\epsilon + 3 + x}{-1} = \dots$~~ $a = 1$ $\frac{-1}{-2} + \frac{b}{-2} = -\epsilon$

$y - 3x + 1 = x^3 + 2x - 2$

$x = -\frac{(-1) \pm \sqrt{(-1)^2 - 4(1)(-1)}}{2} = \frac{1 + \sqrt{5}}{2} \quad \frac{1 - \sqrt{5}}{2} \quad \frac{1 + \sqrt{5} + 1 - \sqrt{5}}{2} = 1$

$a + b = 2a$

$2a = a - 2b + 1$

~~$b = 2a$~~

$b = a$

~~$-2b + 1 = a + b$~~

$a - 2b + 1 = 2a$

~~$4a + 1 = 2a$~~

$a - 2a + 1 - 2a = \dots$

~~$1 = 2a$~~

$-a - 2a + 1 = 2a$

$1 = 4a$
 $a = \frac{1}{4}$

$\epsilon x^2 - ax + \epsilon + 1 = bx^2 + 3x$

$\epsilon - b = 0 \quad (b = \epsilon)$

$-3 + \epsilon - 1 = 0$

~~$-a - 3 = \dots$~~ $(a = 3)$

$(\epsilon + 1 = 0 \quad \epsilon = -1)$