

6	$\frac{bx + \frac{1}{x}}{ax + b} = c \quad bx + \frac{1}{x} = c(ax + b) \quad \wedge c = b \quad bc = \frac{b}{x} \quad c = \frac{b}{x}$ $\wedge a + b = 0 \quad \wedge a = -b \quad a = -\frac{b}{x} \quad \hookrightarrow b \times \frac{b}{x} = x$ $\frac{b}{x} = x > b^2 \wedge b > x$ $\frac{ab}{c} = \frac{-b \times b}{\frac{b}{x}} \quad -b > -b \times x$
7	$f \circ g = \{(2, 1)(3, 1)(-1, -1)(5, 0)\}$ $f = \{(-1, 2)(2, 4)(3, -2)(0, 1)\}$ $f + g = \{(-1, -2)(2, 1)(3, 4)\}$ $\frac{fg}{f+g} = \{(2, 1)(3, 1)(-1, 4)\}$
8	$a = d = \frac{1}{2} \quad \checkmark$ $3a - 2b = 1 \quad -2b = 2 \quad b = -1 \quad \checkmark$ $C = 3a - 2b = 1 \quad a - 3b = c \rightarrow -1 - (3)(-1) = c \rightarrow c = 2$ $d + c = -1 + 1 = 0$ $c + d = 2$
9	$f(x) = g(x) \quad \sqrt{-x^2 + a - m} = b$ $m = \frac{1}{2} \Rightarrow \sqrt{-(a - \frac{1}{2})} = -1 \quad a - \frac{1}{2} = b$ $-a + \frac{1}{2} = b$ $a + b = \frac{1}{2}$ دسته 2
10	$(x - c)^2 = x^2 + c^2 - 2xc = x^2 + c^2 + b \quad c^2 = b \quad -2c = a \quad c = -\frac{a}{2} \quad b = a$ $x(x - c) = x^2 + a \quad x^2 - xc = x^2 + a \quad a = -x$ $a + b + c = \frac{x}{4} - x + a = \frac{x}{4} \quad \checkmark$ $x^2 - x(-x) = x^2 + a \rightarrow a = x$