

$x^2 - 5x - 14 = 0$ $(x-7)(x+2) = 0$ $x = \frac{1 \pm \sqrt{25}}{2}$	$x^2 - 4x - 12 = 0$ $(x-6)(x+2) = 0$ $x = \frac{4 \pm \sqrt{16}}{2}$	$x^2 - 8x - 9 = 0$ $(x+1)(x-9) = 0$ $x = \frac{8 \pm \sqrt{64}}{2}$	$x^2 - 5x - 14 = 0$ (الف) $(x+7)(x-2) = 0$ $x = \frac{5 \pm \sqrt{25}}{2}$	۱
$\Delta = 9 + (4 \times 14) = 65$ $x = \frac{5 \pm \sqrt{65}}{2}$	$\Delta = 16 - (4 \times 12) = -40$ (ب) $\Delta < 0$ $x = \frac{4 \pm \sqrt{-40}}{2}$	$x^2 + 5x + 3 = 0$ (ب) $\Delta = 25 - 12 = 13$ $x = \frac{-5 \pm \sqrt{13}}{2}$	$(x+7)(x-2) = 0$ (الف) $x = -7, +2$	۲
$\{1, 2\}, \{1, 3\}, \{2, 2\}, \{2, 3\}, \{3, 2\}, \{3, 3\} - \{2, 2\}, \{2, 3\}, \{3, 2\}, \{3, 3\}$ $\{1, 2\}, \{1, 3\}$				۳
$m^2 = m + 2 \rightarrow m = 1$ $m < 1$	$m^2 = m + 2$ $m^2 - m - 2 = 0$ $(m+2)(m-1) = 0$	$m^2 = m + 2$ $m^2 - m - 2 = 0$ $(m+2)(m-1) = 0$	$m = 1$ (الف)	۴
$a^2 = 3a - 2 \rightarrow a^2 - 3a + 2 = 0 \rightarrow a = +1, +2$ $+2$				۵

$a^2 - 1 \leq a + b, \quad x^2 = 2a + b \leadsto a + b = 0 \quad \left. \vphantom{\begin{matrix} a^2 - 1 \leq a + b \\ x^2 = 2a + b \end{matrix}} \right\} 2a + b < 1$ $a > 1, \quad b < -1 \leadsto \boxed{a \times b = -4}$	6
$2x - 2 = 4 - 2x$ $4x = 6 \rightarrow \boxed{x = \frac{3}{2}}$	7
(1) تابع است مثال نقیض: $x \geq 0 \quad y \leq \pm 1$	8
(2) تابع است (ب) $y_1^2 + 2y_1 \leq y_2^2 + 2y_2$ تابع است	9
(الف) $\sqrt[3]{y_1 + 2} \leq \sqrt[3]{y_2 + 2}$ تابع است	10
(ب) $\sqrt{\frac{x}{y}} \leq 1$ $\frac{x}{y} \leq 1, \quad \frac{y}{x} \leq 1 \leadsto x \leq y$ تابع است	