

14, 17, 18

مسئله 14

سران ← $-\frac{b}{2a} = 2 \rightarrow 2 - \{a \text{ و } b\} \rightarrow 2 = 2$

15) $y = -\frac{1}{2}x^2 + x + 2 \rightarrow (x - \frac{1}{2})(x + \frac{5}{2}) \rightarrow x = \frac{1}{2}, -\frac{5}{2}$

سران ← $f(x) = mx^2 - 2x + m$

1) $B_1 < 0$

2) $\Delta > 0 \rightarrow 4m - 4(m)(m) = 4 - 4m^2 = (2 - 2m)(2 + 2m)$

سران 3 ← $S = x_1 + x_2 = \frac{2 - \sqrt{4 - 4m^2}}{2} = 1$

$\rightarrow f(x) = x^2 - 2x + \frac{4}{9}$

سران 4 ← $x^2 - 2x + m + 2 = 0 \rightarrow 2(5^2 - 1) - (5)(\frac{\sqrt{4}}{1}) = 12 \rightarrow m = 4$

1) $2a^2 + 3b^2 \rightarrow 2a^2 + a^2 + 2b^2 - b^2 \rightarrow 2(a^2 + b^2) + (a - b)(a + b)$

سران 5 ← $y = ax^2 + bx + c$

2) $-\frac{b}{2a} = 2 \rightarrow 2 - \{a \text{ و } b\} \rightarrow c = 2$

$\rightarrow ax^2 + bx + c \rightarrow ax^2 - \{a \text{ و } b\} \rightarrow \{a - 1a + 2\} = 9$

$\rightarrow -\{a \text{ و } b\} \rightarrow a = -1, b = 2$

$\rightarrow y = -x^2 + 2x + 2 \rightarrow (x + 1)(x - 3) \rightarrow x \in (-1, 3)$

$$ax^2 - vx + qB = 0$$

سوال ۶

$$\rightarrow \frac{qB}{a} = aB \Rightarrow \frac{q}{a} = a \rightarrow q = a^2 \rightarrow a = \pm \sqrt{q}$$

$$\frac{v}{a} = a + B \rightarrow v = a^2 + aB \rightarrow a^2 + aB - v = 0 \rightarrow a^2 + aB - v = 0$$

$$aB + v = 0 \rightarrow B = -\frac{v}{a} \rightarrow \text{برای } B \text{ مثبت است}$$

(۵)

$$a^2 - aB - v = 0 \rightarrow a - B = \frac{v}{a} \rightarrow B = \frac{v}{a} \rightarrow a = \pm \sqrt{v}$$

$$\frac{1}{a} + \frac{1}{B} = -\frac{1}{a} + \frac{a}{v} \rightarrow \frac{-1 + a^2}{v} = \boxed{\frac{v}{v}} = 1$$

$$f(x) = mx^2 + (x + \frac{m}{x} + v) \rightarrow -\frac{x}{xm} \rightarrow \frac{x}{m} = x_s$$

سوال ۷

$$\rightarrow m(\frac{x}{m}) - \frac{1}{m} + \frac{m}{x} + v = 1 \rightarrow \frac{x}{m} - \frac{1}{m} + \frac{m}{x} + v = 1$$

(۵)

$$-\frac{x}{m} + \frac{m}{x} + v = 1 \rightarrow \frac{-x^2 + m^2 + vxm}{xm} = 0$$

$$\rightarrow m^2 - xm - 1 = 0 \rightarrow (m-1)(m+1) = 0$$

$$\rightarrow -xm^2 + (x + v) \rightarrow (x - v)(x + 1) \rightarrow \boxed{K = v}$$

MAX
مورد

$$a^2 - mB = 1 \rightarrow xm - ma - mB = 1 \rightarrow m(a + B + x) = 1$$

سوال ۸

$$\rightarrow a^2 + ma - xm = 0 \rightarrow a^2 + xm - ma \rightarrow -m(\bar{m} + x) = 1$$

$$\rightarrow +m^2 + xm = 1$$

(۵)

$$\rightarrow m^2 + xm - 1 = 0 \rightarrow (m + 1)(m - 1) = 0$$

(m - 1) x
Δ x = 0
m = 1 ✓

$$\rightarrow x^2 + vx - 1 \rightarrow S = -\frac{b}{a} = \boxed{-v}$$

$$f(x) = ax^2 + bx + c \rightarrow ax^2 + bx + 1 \rightarrow ax^2 - (ax + 1)$$

سوال ۹

$$\rightarrow \frac{b}{a} = x \rightarrow -\frac{1}{a} = b$$

$$x = \frac{b}{a} \rightarrow \frac{1}{a} = -b$$

$$\rightarrow -\frac{1}{a} = b$$

$$\rightarrow -\frac{1}{a} = b$$

Scanned with

(۱/۵)

$$a = \frac{1}{x}, b = 2 \rightarrow -\frac{1}{x}x^2 + 2x + 1 \rightarrow \frac{1}{a} + \frac{1}{b}$$

$$\rightarrow \frac{a+b}{ab} = \frac{S}{P} = \frac{2}{-2-1} = \boxed{-1} = \frac{1}{-1}$$

$$x^2 - (a+2)x + (2ax + 4a + 2) = 0$$

(1, 25)

سران

$$x^2 - (a+2)x + (2ax + 4a + 2) = 0 \rightarrow 2ax^2 - 2ax - 1 \rightarrow (a-1)(a+\frac{1}{a})$$

$$\rightarrow a=1 \rightarrow \Delta < 0 \times$$

$$\rightarrow a = \frac{1}{a} \rightarrow \checkmark$$

$$x^2 - \frac{1}{a}x + \frac{2}{a} \rightarrow (x - \frac{1}{a})(x - 2) \rightarrow x = \frac{1}{a}$$

$$\boxed{x = \frac{1}{a}}$$

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