

1 $x^2 - 5x + p$ $aB = 2$

$a+B = +a$

$2a = 20 - 4B$

$B^0 = B^1 \times B^1 \times B^1 = 4 \times 9 \times B - 210$

$\frac{4a + B^0}{aB^1} = \frac{20 - 4B + 4 \times 9 \times B - 210}{20B - 10} = 19$

2 چون هر دو و های یکسانی دارند پس محور تقارن تابع (و وسط دور است)

مجموع صفهای تابع است $0.75 \times 2 = 1.5$ $\frac{2 - 1.5}{2} = \frac{1.5}{2} = 0.75$

3 $\Delta = 4k^2 - 20$ $\frac{-2k + 2\sqrt{k^2 - 5} + 2k + 2\sqrt{k^2 - 5}}{2} = 2\sqrt{k^2 - 5} = \frac{4}{3}k$

$k^2 - 5 = \frac{4}{9}k^2 \rightarrow k^2(\frac{5}{9}) = 5 \rightarrow k^2(\frac{1}{9}) = 1 \rightarrow k^2 = 9$

$[\frac{9}{2}] = [4.5] = 4$

4 $\frac{3+(-a)}{2} = -1 \rightarrow a+B = -2 \rightarrow \frac{a^2+B^2}{2} + \frac{2aB}{-1} = 2 \rightarrow aB = -\frac{1}{2}$

$a(-1)^2 + b(-1) + c = a+b+c = 1$ $c=3$

$a(0)^2 + b(0) + c = c = 3$

5 $\frac{-b}{2a} = \frac{4}{m}$ $m(\frac{4}{m})^2 - 12(\frac{4}{m}) + dm - 1 = 2$

$= \frac{16}{m} + dm = 3$ $dm^2 - 3m - 16 = 0$

$\Delta 9 + 4 \times 16 = 149$ $\frac{3 \pm \sqrt{149}}{2} = 36$ $\frac{-12}{15}$ چون گفته است $m > 0$ و $a > 0$

$x = \frac{4}{m} = \frac{4}{2} = 2$

$$\Delta = 4a^2 + 1 \quad \alpha = -a - 1 - \sqrt{a^2 + 1} \quad \beta = -a - 1 + \sqrt{a^2 + 1}$$

$$a^2 = (-a - 1 - \sqrt{a^2 + 1})(-a - 1 + \sqrt{a^2 + 1}) = 2a - 1$$

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

$$x^2 = t \quad t^2 - \sqrt{t} - a = 0 \quad \Delta = 99 \quad t = x^2 \text{ پس باید مثبت باشد}$$

$$t = \frac{\sqrt{t} \pm \sqrt{99}}{2} \rightarrow x = \pm \sqrt{\frac{\sqrt{t} \pm \sqrt{99}}{2}} \quad S = 0 \quad P = -\frac{\sqrt{t} \pm \sqrt{99}}{2}$$

$$2P^2 - \sqrt{S}P + \sqrt{S} = x(49 + 99 + 14\sqrt{99}) = 29 + \sqrt{99}$$

$$-\frac{b}{ca} = \frac{1}{k} \quad k\left(\frac{1}{k}\right) - \frac{1}{k} - 6 = -\frac{1}{k} - 6 \quad (\text{رأس همی: } 16 - 1)$$

$$-\frac{1}{k} - 6 = -\frac{1}{k} - 6 \rightarrow \frac{1}{k} = 2 \rightarrow k = \frac{1}{2}$$

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

$$m^2 + 2m + 1 + 4m^2 + 4m = 5m^2 + 6m + 1 = (5m+1)(m+1)$$

$$m = -\frac{1}{5}, m = -1 \quad -1 < m < -\frac{1}{5} \text{ نسبت}$$

$$-\left(\frac{9}{r}\right)^2 + 2\left(\frac{9}{r}\right) + m < 0 \Rightarrow -\frac{11}{r} + \frac{9}{r} < -m \quad \frac{9}{r} < -m$$

$$\frac{-\frac{9}{r}}{-1} \Rightarrow m = \left(-\infty, -\frac{9}{r}\right)$$

$$\Delta > 0 \Rightarrow 4a - 4(-m) > 0 \Rightarrow 4a + 4m > 0 \Rightarrow 4m > -4a \Rightarrow m > -\frac{a}{1}$$

$$\left(-\frac{a}{1}, +\infty\right) \cap \left(-\infty, -\frac{9}{r}\right) = \left(-\frac{11}{r}, -\frac{9}{r}\right) \Rightarrow \text{نسبت}$$