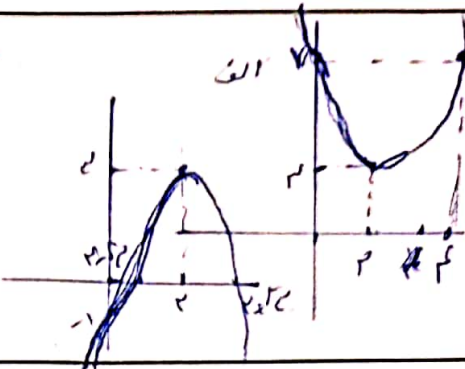


$$x^2 - 2x + 1 = 0 \quad \frac{-b}{2a} = \frac{2}{2} = 1 \quad \frac{c}{a} = \frac{1}{1} = 1$$

$$x^2 - 2x + 1 = 0 \quad \Delta = 4 - 4 = 0$$

$$x = 1$$



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$$1) \Delta > 0 \quad x^2 + 2x - 1 > 0$$

$$x^2 - 2x - 1 > 0$$

$$\Delta = 4 + 4 = 8$$

$$x = \frac{-2 \pm \sqrt{8}}{2} = -1 \pm \sqrt{2}$$

$$\Delta < 0 \quad x^2 - 2x - 1 < 0$$

$$x^2 - 2x - 1 < 0$$

$$\Delta = 4 + 4 = 8$$

$$x = \frac{2 \pm \sqrt{8}}{2} = 1 \pm \sqrt{2}$$

$$2) \Delta < 0 \quad x^2 - 2x - 1 < 0$$

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$$\Delta = 4 + 4 = 8$$

$$x = \frac{2 \pm \sqrt{8}}{2} = 1 \pm \sqrt{2}$$

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$$1) p > 0 \quad \frac{1}{m-2} > 0 \rightarrow m-2 > 0 \quad m > 2 \Rightarrow (2, \infty)$$

$$\frac{p+m+2}{m-2} < 0 \quad \frac{m+2}{m-2} < 0 \quad m < -1 \quad m > 2 \Rightarrow \emptyset$$

$$(1, 2) \cap (2, \infty) = \emptyset$$

$$2) p < 0 \quad \frac{1}{m-2} < 0 \quad m-2 < 0 \quad m < 2 \Rightarrow (-\infty, 2)$$

$$\frac{p+m+2}{m-2} < 0 \quad \frac{m+2}{m-2} < 0 \quad m < -1 \quad m < 2 \Rightarrow (-\infty, -1) \cup (-1, 2)$$

$$(-\infty, -1) \cap (-\infty, 2) = (-\infty, -1)$$

$$(-1, 2) \cap (-\infty, 2) = (-1, 2)$$

$$1) p < 0 \quad \frac{1}{m-2} < 0 \quad m-2 < 0 \quad m < 2 \Rightarrow (-\infty, 2)$$

$$\Delta > 0 \quad (-2m-2)^2 - 4m + 4 > 0 \quad 4m^2 + 8m + 4 - 4m + 4 > 0 \quad 4m^2 + 4m + 8 > 0$$

$$m^2 + m + 2 > 0 \quad \Delta = 1 - 8 = -7 < 0$$

$$m < -2 \quad m > 2 \Rightarrow \emptyset$$

$$(-2, 2) \cap (-\infty, 2) = (-2, 2)$$

$$2) p < 0 \quad \frac{1}{m-2} < 0 \quad m-2 < 0 \quad m < 2 \Rightarrow (-\infty, 2)$$

$$\frac{p+m+2}{m-2} < 0 \quad \frac{m+2}{m-2} < 0 \quad m < -1 \quad m < 2 \Rightarrow (-\infty, -1) \cup (-1, 2)$$

$$(-\infty, -1) \cap (-\infty, 2) = (-\infty, -1)$$

$$(-1, 2) \cap (-\infty, 2) = (-1, 2)$$

$$\Delta > 0 \quad \sin^2 x > 0 \quad \sin^2 x > 1 \rightarrow \sin^2 x = 1$$

$$\sin^2 x = \frac{1 - \cos(2x)}{2} = 1 \rightarrow 1 - \cos(2x) = 2 \rightarrow \cos(2x) = -1$$

$$2x = \pi \quad x = \frac{\pi}{2}$$

$$x = \frac{\pi}{2}$$

$$x^2 - 2x + \frac{c}{a} = 0 \rightarrow x = \frac{-b}{2a} = \frac{2}{2} = 1$$

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$$\frac{(m-1)(m+1)(m-0)(m+1)}{-(m-1)(m+1)} \neq \pm 1 / -m^2 + 1m + 0 = 0$$

$$\frac{-b}{a} = \frac{-1m}{-1m} = \frac{1m}{1m} \quad \frac{1m}{1m} \neq \pm 1 \quad -5\left(\frac{15}{1m}\right) + 1m\left(\frac{1m}{1m}\right) + 0 =$$

$$-5\left(\frac{15q}{1mf}\right) + \frac{15q}{1f} + 0 = \frac{-15q}{mf} + \frac{15}{1f} + 0 = \frac{-15q + 15m + 1m}{mf} = \frac{1m9}{mf}$$

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$$mS = 0p + v \quad S = \frac{m+p}{m} \quad p = -\frac{r}{m}$$

$$\frac{m+5}{m} = \frac{-1}{m} + v \rightarrow \frac{m+5}{m} = \frac{-1 + vm}{m} \rightarrow m+5 = -1 + vm \Rightarrow 15 \leq m$$

$$S = \frac{r+p}{r} = \frac{r}{r} \quad p = -\frac{r}{r} = -1$$

$$B^r + 2^r = (B+2)^r - r\alpha B \rightarrow S^r - r\alpha p = \frac{9}{r} + 1 = \frac{15}{r}$$

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$$B^r = 0B - r \quad B^m = 0B^r = 0(0B - r) = 0B^r - rB \rightarrow 0(0B - r) - rB = rB - 10$$

$$B^0 = B^r \cdot B^m = (0B - r)(rB - 10) = 110B^r - 0.0B - r^2B + r0 = 110B^r - 99B + r0$$

$$B^0 = 110(0B - r) - 99B + r0 = 110B^r - 110r - 99B + r0 \quad \alpha + m = 0 \rightarrow \alpha = 0 - B$$

$$\frac{0(0-B) + 110r - 99B - r0}{0B^r} = \frac{r0 - rB + 110r - r0}{0B^r} = \frac{110r - rB}{0B^r} \rightarrow \frac{110r - rB}{B^r} \rightarrow \frac{110r - rB}{0B - r} = 19$$

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$$r \leq \frac{1}{r} \Rightarrow r + 1 = 1f \quad -r \Rightarrow \frac{1}{r} \Rightarrow -r + 1 = f$$

$$\begin{cases} a + 2b + c = 1f \\ 9a - 3b + c = f \end{cases} \rightarrow \alpha a - 0b = -10 \quad \alpha - b = -r \rightarrow \alpha = -r + b$$

$$c = f \quad \alpha = -r + b \rightarrow -r + r = 1 \quad \frac{-b}{r0} = \frac{-r}{r} = -\frac{r}{r}$$

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$$2m^2 + (m+1)m + m + 5 = 0 \rightarrow 2m^2 + m + m + 5 = 0$$

$$\Delta = m^2 - 4m - 10 \leq 0 \quad \Delta = \frac{1 \pm 13}{2} \quad \left(\frac{1}{-1} \right)$$

$$2m^2 + 13m + 10 = 0 \quad \Delta = 13^2 - 4(2)(10) = 29 \quad \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{-13 \pm 5}{2}$$

$$2m^2 - 3m + 2 \quad \Delta = 3^2 - 4(2)(2) = -7 \quad \left(-1 \right)$$

نکته: این معادله را می توان به صورت زیر نوشت
 $2m^2 - 3m + 2 = 0$

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