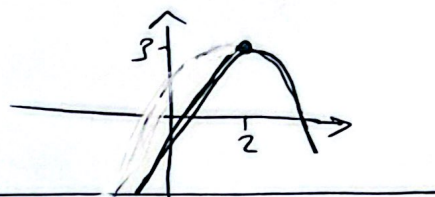
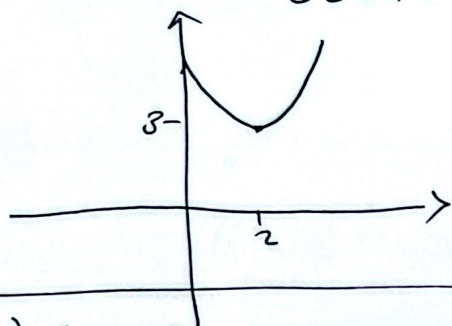


میکائیلی 12 کلاس A
 1. $y = 4 - 1 = 3$ $\rightarrow$ $a_3 = 2$ $b_3 = -4$ $c_3 = 3$



2. $(m+1)^2 - 4(2)(\frac{1}{2}m+2) > 0 \Rightarrow m^2 - 2m - 15 > 0 \Rightarrow (m-5)(m+3) > 0$
 $\Rightarrow (-\infty, -3) \cup (5, +\infty)$

$\rightarrow (m-5)(m+3) = 0 \Rightarrow m = \{-3, 5\}$

ج. $(m-5)(m+3) = 0 \Rightarrow (-3, 5)$

د. $(m-5)(m+3) \geq 0 \Rightarrow (-\infty, -3] \cup [5, +\infty)$

3. الف) $\Delta > 0 \Rightarrow (2m+2)^2 - 4(m-2)(10) > 0 \Rightarrow 4m^2 - 32m + 84 > 0$

$p > 0 \rightarrow \frac{10}{m-2} > 0 \Rightarrow (2, +\infty)$ $q < 0 \Rightarrow \frac{2(m+1)}{(m-2)} < 0 \Rightarrow (-1, 2)$
 $\Rightarrow m \in \emptyset$

ب. $\Delta > 0 \Rightarrow 4m^2 - 32m + 84 > 0 \rightarrow$ همیشه برقرار است

$p < 0 \Rightarrow \frac{10}{m-2} < 0 \Rightarrow (-\infty, 2)$ $q < 0 \Rightarrow \frac{2(m+1)}{m-2} < 0 \Rightarrow (-2, 2)$

$m \rightarrow (-2, 2)$

انف) $p < 0 \rightarrow \frac{10}{m-2} < 0 \Rightarrow (-\infty, -2)$ $\Rightarrow m \in (-\infty, -2)$

$\Delta > 0 \rightarrow (2m+2)^2 - 4(m-2)(10) > 0 \rightarrow$ همیشه برقرار است

ب. $\frac{b}{a} = -4 \rightarrow \frac{m+1}{m-2} = -4 \Rightarrow 3m = 3 \Rightarrow m = 1$

5. $4\sin^2 \alpha - 4(\frac{1}{3})(\frac{1}{2}) \geq 0 \Rightarrow 4\sin^2 \alpha \geq 1 \Rightarrow \sin^2 \alpha \geq \frac{1}{4} \Rightarrow \sin \alpha \geq \frac{1}{2}$
 $\sin \alpha = 1 \Rightarrow (2m-3)^2 \geq 0 \rightarrow m \geq \frac{3}{2}$ $\sin \alpha = -1 \Rightarrow (2m+3)^2 \geq 0 \rightarrow m \leq -\frac{3}{2}$

$$\frac{(x-1)(3x+1)(2x+5)(x+7)}{(1-x)(x+7)} = -6x^2 + 13x + 5 \Rightarrow -((13)^2 - 4(-6)(5)) \cdot \frac{6}{24} = \frac{41(-6)}{24}$$

$$3\left(\frac{m+2}{m}\right) + 5\left(\frac{2}{m}\right) + 7 = \frac{3m+6+10}{m} + 7 \Rightarrow m = 4$$

$$x^2 + y^2 = 5^2 - 2xy = \left(\frac{6}{4}\right)^2 - 2\left(-\frac{1}{2}\right) = \frac{13}{4}$$

$$B^3 = B(5B-2) = 5B^2 - 2B = 23B - 10$$

$$B^4 = 105B - 46 \Rightarrow B^5 = 479B - 216$$

$$\frac{4x + B^5}{5(5B-2)} = \frac{4(5-B) + 479B - 216}{25B-10} \Rightarrow B = 19$$

$$x = -3 \Rightarrow y_1 = 9a - 3b + 4 \quad y_2 = 4 \Rightarrow 9a - 3b = 0 \Rightarrow 3a = b$$

$$x = -2 \Rightarrow y_1 = 4a + 2b + 4 \quad y_2 = 14 \Rightarrow 2a + b = 5 \Rightarrow 5a = 5 \Rightarrow a = 1$$

$$y_2 \quad x^2 + 3x + 4 \Rightarrow -\frac{3}{2}$$

$$2x^2 + mx + m + 6 = 0 \Rightarrow m^2 - 4(m+6)(2) = 0$$

$$(m-12)(m+4) = 0 \Rightarrow m = -4 \Rightarrow (x-1)^2 = 0 \rightarrow |1| \rightarrow \text{قبول} \checkmark$$

$$m = 12 \Rightarrow (x+3)^2 = 0 \rightarrow | -3 | \rightarrow \text{غير قابل قبول}$$