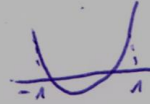


4.17
61.

$$x^2 - \frac{2m+6}{m+1}x + \frac{3m+7}{m+1} = 0$$



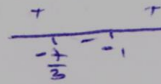
$$0 < \Delta = \frac{4m^2 + 24m + 36}{(m+1)^2} - \frac{12m+28}{m+1} = \frac{-8m^2 - 16m + 8}{(m+1)^2}$$

$$0 > \frac{8(m^2 + 2m - 1)}{(m+1)^2} + \frac{+}{-1-\sqrt{2} \quad -1 \quad -1+\sqrt{2}}$$

$$\boxed{-1-\sqrt{2} < m < -1+\sqrt{2}} \\ m \neq -1$$

$$0 < f(1) = \frac{m+1 - 2m - 6 + 3m+7}{m+1} = \frac{2m+2}{m+1} = 2$$

$$0 < f(-1) = \frac{m+1 + 2m+6 + 3m+7}{m+1} = \frac{6m+14}{m+1}$$



$$\boxed{m > -1} \\ m < -\frac{1}{3}$$

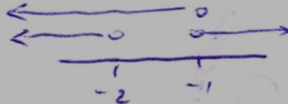
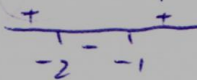
$$-1 < -\frac{b}{2a} < 1 \rightarrow -1 < \frac{2m+6}{2(m+1)} < 1$$

$$0 < \frac{2m+6+2m+2}{2(m+1)} \quad \text{opt.}$$

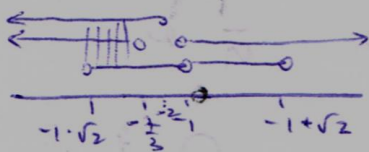
$$\frac{2m+6-2m-2}{2(m+1)} < 0$$

$$0 < \frac{4m+8}{2(m+1)}$$

$$\frac{4}{2(m+1)} < 0$$



$$\boxed{m < -2}$$



spisok

$$\boxed{-1-\sqrt{2} < m < -\frac{1}{3}}$$