

1.7.1
1

$$2ax^2 - (a+1)x + 1 = 0$$

אם $a=0$ אז $x=1$ (אם $a=0$ אז $2a \neq \sqrt{a+1}$ וכו')

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

$$\Delta \geq 0, -1 < -\frac{b}{2a} < 1 \quad f(-1) > 0, f(1) > 0 \quad \text{אם } a > 0$$



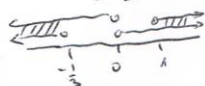
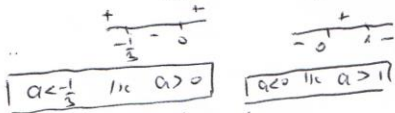
$$0 < f(1) = 1 - \frac{a+1}{2a} + \frac{1}{2a} = \frac{2a - a - 1 + 1}{2a} = \frac{a}{2a} = \frac{1}{2} > 0 \rightarrow \boxed{a > 0}$$

$$0 < f(-1) = 1 + \frac{a+1}{2a} + \frac{1}{2a} = \frac{2a + a + 1 + 1}{2a} = \frac{3a + 2}{2a} > 0 \rightarrow \boxed{a > -\frac{2}{3}}$$

$$-1 < -\frac{b}{2a} < 1 \rightarrow -1 < \frac{a+1}{2a} < 1$$

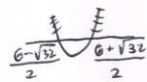
$$0 < \frac{a+1+2a}{2a} \rightarrow \frac{3a+1}{2a} > 0 \rightarrow \boxed{a > -\frac{1}{3}}$$

$$0 < \frac{3a+1}{2a} \rightarrow \frac{3a+1}{2a} > 0 \rightarrow \boxed{a > -\frac{1}{3}}$$



$$\boxed{a < -\frac{1}{3} \text{ or } a > 0}$$

$$0 \leq \Delta = (a+1)^2 - 8a = a^2 - 6a + 1$$



$$\boxed{a < 6 - \sqrt{8} \text{ or } a > 6 + \sqrt{8}}$$

