

1.30
1

$$\begin{cases} (m+3)s + 2t = 0 \\ 2ms + t = 9 - 3m \end{cases}$$

$$\begin{aligned} s &= x_1 + x_2 \\ t &= x_1 \cdot x_2 \end{aligned} \quad \text{1.10}$$

$$\begin{cases} t = -\frac{(m+3)s}{2} \\ t = 9 - 3m - 2ms \end{cases}$$

$$-\frac{(m+3)s}{2} = 9 - 3m - 2ms \quad / \cdot 2$$

$$-(m+3)s = 18 - 6m - 4ms$$

$$s(-m-3+4m) = 18-6m$$

$$s = \frac{18-6m}{3m-3} = \frac{6(3-m)}{3(m-1)} = \frac{2(3-m)}{m-1}$$

$$t = -\frac{(m+3) \cdot 2(3-m)}{2(m-1)} = \frac{m^2-9}{m-1}$$

המשוואה הריבועית היא:

$$x^2 - \frac{2(3-m)}{m-1}x + \frac{m^2-9}{m-1} = 0 \quad (/ \cdot (m-1))$$

$$(m-1)x^2 - 2(3-m)x + m^2 - 9 = 0$$

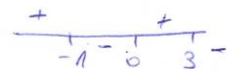
כדי שיהיו 2 פתרונות, המשוואה צריכה להיות $\Delta > 0$

$$0 < [-2(3-m)]^2 - 4(m-1)(m^2-9)$$

$$0 < 4(3-m)^2 - 4(m-1)(m-3)(m+3)$$

$$0 < 4(m-3)[m-3 - (m-1)(m+3)]$$

$$0 < 4(m-3)(-m^2-m) = 4(m-3)(-m)(m+1)$$

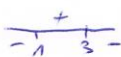


$$m < -1 \quad \vee \quad 0 < m < 3$$

(2) $\Delta > 0, \frac{-b}{a} > 0, \frac{c}{a} > 0$ 2 פתרונות חיוביים

$m < -1 \quad \vee \quad 0 < m < 3$ כאן $\Delta > 0$

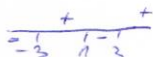
$1 < m < 3$



$$\frac{2(3-m)}{m-1} > 0$$

$$\frac{-b}{a} > 0$$

$-3 < m < -1 \quad \vee \quad m > 3$



$$\frac{m^2-9}{m-1} > 0$$

$$\frac{c}{a} > 0$$

כל פתרונות

