

$$\frac{0.14}{1} \textcircled{12} \begin{cases} (m-2)x + my = 1 \\ (m+2)x + (m+1)y = 3 \end{cases}$$

$$m^2 - 2m - 2 \neq m^2 + 2m \leftarrow \frac{m-2}{m+2} \neq \frac{m}{m+1} \quad \text{: רחב}$$

$$\boxed{m + \frac{-2}{3}}$$

$$y = 2 - 4x \leftarrow -4x - y = -2 \quad \text{: לפי איברי המשוואה}$$

$$(m+2)x + (m+1)(2-4x) = 3$$

: לפי איברי המשוואה

$$x(m+2-4m-4) = 3-2m-2$$

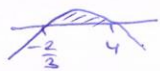
$$x = \frac{1-2m}{-3m-2} = \frac{2m-1}{3m+2}$$

$$y = 2 - 4 \cdot \frac{2m-1}{3m+2} = \frac{6m+4-8m+4}{3m+2} = \frac{8-2m}{3m+2}$$

$$\textcircled{2} \sqrt{\frac{y}{2}} < x$$

$$0 \leq y = \frac{8-2m}{3m+2}$$

$$-\frac{2}{3} < m \leq 4$$



$$0 \leq x = \frac{2m-1}{3m+2}$$

$x \geq 0, y \geq 0$ רחב
 הפירוק הוא רק רחב!
 $m < -\frac{2}{3}$ או $m \geq \frac{1}{2}$

$$\sqrt{\frac{y}{2}} < x$$

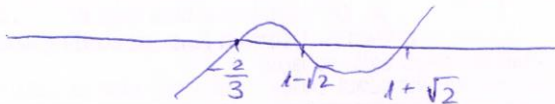
אם נרצה להפוך את האי-שוויון לריבועי נרשום
 $\frac{y}{2} < x^2$

$$\frac{y}{2} < x^2 \rightarrow y < 2x^2$$

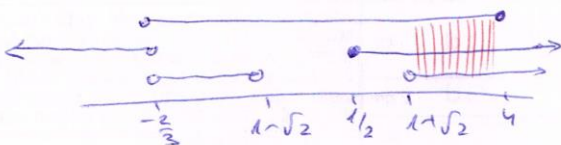
$$\frac{8-2m}{3m+2} < 2 \left(\frac{2m-1}{3m+2} \right)^2$$

$$0 < -\frac{8-2m}{3m+2} + 2 \cdot \frac{4m^2-4m+1}{(3m+2)^2} = \frac{6m^2-20m-16+8m^2-8m+2}{(3m+2)^2}$$

$$0 < \frac{14m^2-28m-14}{(3m+2)^2} = \frac{14(m^2-2m-1)}{(3m+2)^2}$$



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



התחום המשותף:

$$\boxed{1 + \sqrt{2} < m \leq 4}$$