

4.5
1

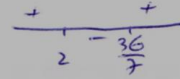
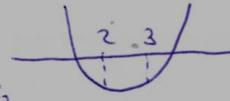
$$\textcircled{a}. (m-2)x^2 - 2(m+3)x + 4m = 0 \quad \because (m-2) \neq 0$$

$$x^2 - \frac{2m+6}{m-2}x + \frac{4m}{m-2} = 0$$

$$0 > f(3) = 9 - \frac{6m+18}{m-2} + \frac{4m}{m-2}$$

$$0 > \frac{9m-18-6m-18+4m}{m-2} = \frac{7m-36}{m-2}$$

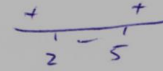
$$2 < m < \frac{36}{7}$$



$$0 > f(2) = 4 - \frac{4m+12}{m-2} + \frac{4m}{m-2} =$$

$$0 > \frac{4m-8-4m-12+4m}{m-2} = \frac{4m-20}{m-2}$$

$$2 < m < 5$$



$2 < m < 5$ מתוך הפתרונות / וכן

$$\textcircled{b} \quad \frac{1}{x_1+1} + \frac{1}{x_2+1} = 2$$

$$\frac{x_2+1+x_1+1}{x_1x_2+x_1+x_2+1} - 2 = 0$$

$$\rightarrow \frac{(x_2+x_1)+2 - 2x_1x_2 - 2(x_1+x_2) - 2}{x_1x_2+x_1+x_2+1} = 0$$

$$x_1+x_2 = -\frac{b}{a}$$

סכום הפתרונות

$$x_1 \cdot x_2 = \frac{c}{a}$$

דופהר הפתרונות

$$-(x_1+x_2+2x_1x_2) = 0$$

$$-\frac{2m+6}{m-2} - \frac{8m}{m-2} = 0$$

$$-2m-6-8m = 0$$

$$m = -0.6$$

(הפתרון האחרון לא מתאים)