

Sistemi di disequazioni lineari

Es. 176 a pag. 531

176 $\begin{cases} 9x - 15 - 2(x + 1) \geq -2(x - 3) - 20 \\ \frac{1-x}{2} + 1 \geq \frac{2}{3}x - \frac{4}{3} \end{cases}$

$$\left[\frac{1}{3} \leq x \leq \frac{17}{7} \right]$$

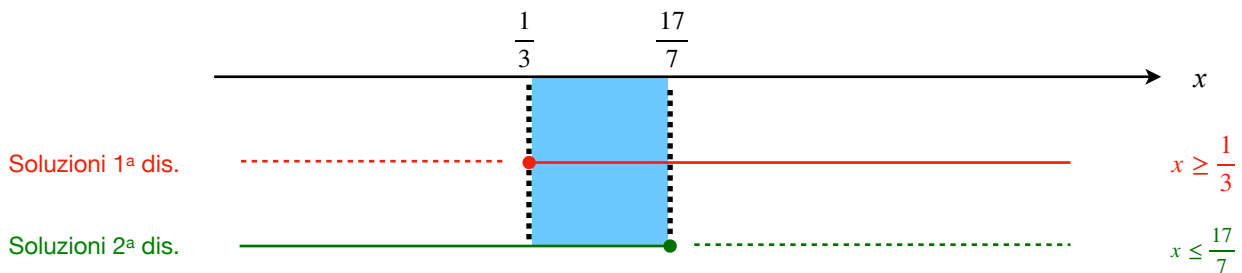
$$\begin{cases} 9x - 15 - 2x - 2 \geq -2x + 6 - 20 \\ 6\left(\frac{1-x}{2} + 1\right) \geq 6\left(\frac{2}{3}x - \frac{4}{3}\right) \end{cases} ; \begin{cases} 9x - 17 \geq -14 \\ 6\frac{1-x}{2} + 6 \geq 6 \cdot \frac{2}{3}x - 6 \cdot \frac{4}{3} \end{cases}$$

$$\begin{cases} 9x \geq 17 - 14 \\ 3(1-x) + 6 \geq 4x - 8 \end{cases} ; \begin{cases} 9x \geq 3 \\ 3 - 3x + 6 \geq 4x - 8 \end{cases} ; \begin{cases} x \geq \frac{3}{9} \\ -3x - 4x \geq -3 - 6 - 8 \end{cases}$$

$$\begin{cases} x \geq \frac{1}{3} \\ -7x \geq -17 \end{cases} ; \begin{cases} x \geq \frac{1}{3} \\ x \leq \frac{-17}{-7} \end{cases} ; \begin{cases} x \geq \frac{1}{3} \\ x \leq \frac{17}{7} \end{cases}$$

Confrontiamo $\frac{1}{3}$ con $\frac{17}{7}$: $\rightarrow \frac{1}{3} \cdot \frac{7}{7} \quad \frac{17}{7} \cdot \frac{3}{3} \rightarrow \frac{7}{21} < \frac{51}{21}$ cioè $\frac{1}{3} < \frac{17}{7}$

Grafici delle soluzioni delle due equazioni



Soluzione del sistema: $\frac{1}{3} \leq x \leq \frac{17}{7}$