

CORREZIONE ESERCIZI

N° 67 P. 34

C.E.

$$\frac{1-ax}{a+2} > x - \frac{1}{2} \quad \{a \in \mathbb{R} \mid a \neq -2\}$$

$$\frac{1-ax}{a+2} - x + \frac{1}{2} > 0$$

$$\frac{2-2ax-2x(a+2)+a+2}{2(a+2)} > 0$$

$$\frac{2-4ax-4x+a+2}{2(a+2)} > 0$$

$$N > 0 \rightarrow -x(4a+4) + 4 + a > 0$$

$$-x(4a+4) > -4-a$$

$$x(4a+4) < 4+a$$

$$\text{se } 4a+4 > 0 \rightarrow a > -1$$

$$x < \frac{4+a}{4a+4}$$

N)

$$\begin{aligned} \text{se } a > -1 \\ x &< \frac{4+a}{4(a+1)} \end{aligned}$$

$$\text{se } 4a+4 < 0 \rightarrow a < -1$$

$$x(-4a-4) > -4-a$$

$$\begin{aligned} \text{se } a < -1 \\ x &> \frac{4+a}{4(a+1)} \end{aligned}$$

$$x > \frac{-4-a}{-4a-4} \rightarrow x > \frac{4+a}{4a+4}$$

$$\text{se } 4a+4 = 0 \rightarrow a = -1 \rightarrow 3 > 0 \forall x \in \mathbb{R}$$

$$D > 0 \rightarrow 2(a+2) > 0$$

$$2a+4 > 0$$

$$a > -2$$

$$\text{se } a > -2 \quad D +$$

$$\text{se } a < -2 \quad D -$$

	-2		-1	
N	-	-	+	+
D	-	+	+	+
N/D	+	-	+	+

$$\text{se } a < -2 \vee a > -1 \rightarrow x < \frac{a+4}{4(a+2)}$$

$$\text{se } a < -2 \quad \left. \begin{array}{l} N) \ x > \frac{4+a}{4(a+1)} \\ D) \ - \end{array} \right\} x < \frac{4+a}{4(a+1)}$$

$$\text{se } a > -1 \quad \left. \begin{array}{l} N) \ x < \frac{4+a}{4(a+1)} \\ D) \ + \end{array} \right\} x < \frac{4+a}{4(a+1)}$$

$$\text{se } -2 < a < -1$$

2/3

$$\left. \begin{array}{l} N) \quad x > \frac{4+a}{4(a+1)} \\ D) \quad + \end{array} \right\} x > \frac{4+a}{4(a+1)}$$

se $a = -2$ perde significado

se $a = -1$ $\forall x \in \mathbb{R}$

n70

$$\frac{x+2}{k+2} \leq x + \frac{k}{2k+4}$$

$$C.E.: \{x \in \mathbb{R} \mid k \neq -2\}$$

$$\frac{2x+4}{2(k+2)} \leq \frac{2kx+4x+k}{2(k+2)}$$

$$\frac{2kx+4x+k-2x-4}{2(k+2)} \geq 0$$

$$\frac{2x+2kx+k-4}{2(k+2)} \geq 0$$

se $k > -2$ D+ | se $k < -2$ D-

$$\begin{aligned} \vee) \quad & 2x+2kx+k-4 \geq 0 \\ & 2x+2kx \geq 4-k \\ & 2x(1+k) \geq 4-k \end{aligned}$$

$$\text{Se } 1+k > 0 \xrightarrow{k > -1} x \geq \frac{4-k}{2(1+k)}$$

$$\text{Se } 1+k < 0 \rightarrow k < -1$$

$$2x(-1-k) \leq 4-k$$

$$x \leq \frac{4-k}{2(-1-k)}$$

$$x \leq \frac{4-k}{2+2k}$$

$$\text{Se } 1+k = 0 \rightarrow k = -1$$

$$\frac{x+2}{-1+2} \leq x + \frac{-1}{-2+4}$$

$$x+2 \leq x - \frac{1}{2}$$

$$2 \leq -\frac{1}{2} \rightarrow \nexists x \in \mathbb{R}$$

	-2		-1	
	-----> k			
k	-		-	+
D	-	0	+	+
N/D	+	0	-	+

$$\text{Se } k < -2 \rightarrow x \geq \frac{4-k}{2(k+2)}$$

Se $k = -2$ perde signif.

$$\text{Se } -2 < k < -1 \rightarrow x \leq \frac{4-k}{2(k+2)}$$

$$\text{Se } k = -1 \rightarrow \nexists x \in \mathbb{R}$$

$$\text{Se } k > -1 \rightarrow x \geq \frac{4-k}{2(k+2)}$$