

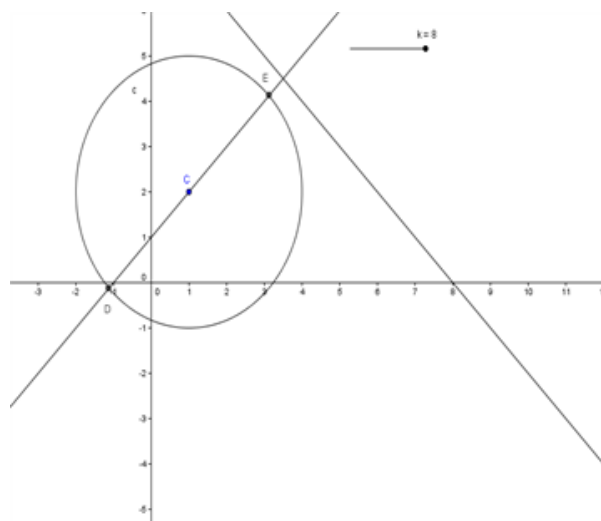
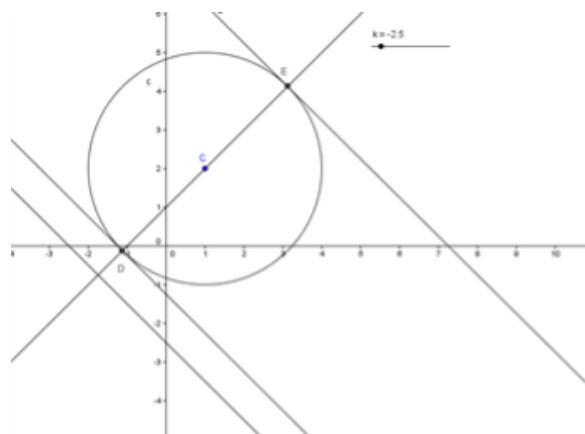
$$? : \left(y - \frac{4 + 3\sqrt{2}}{2} \right) = \left(x - \frac{2 + 3\sqrt{2}}{2} \right)$$

$$2y - 4 + 3\sqrt{2} = -2x + 2 - 3\sqrt{2}$$

$$2y = -2x + 6 - 6\sqrt{2}$$

$$y = -x + 3 - 3\sqrt{2}$$

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Rappresenta graficamente e det. x
 insieme di esse il dominio e il codominio

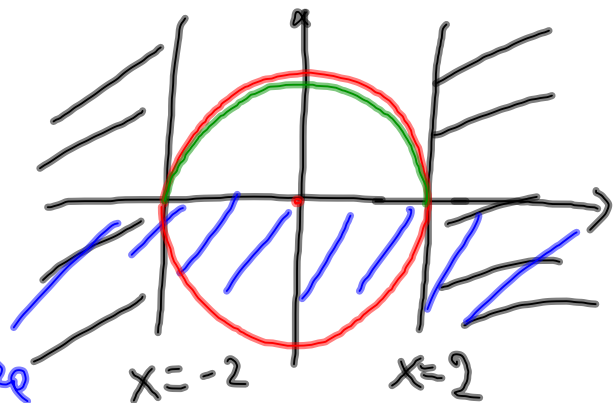
$$y = \sqrt{4-x^2}$$

funz. mat. alg. ines
 (molta pari) intera

Cond. $\left\{ \begin{array}{l} 4-x^2 \geq 0 \\ y \geq 0 \\ y^2 = (\sqrt{4-x^2})^2 \end{array} \right.$

$\left\{ \begin{array}{l} 4-x^2 \geq 0 \\ y \geq 0 \\ y^2 = 4-x^2 \end{array} \right.$

luogo geom. $\left\{ \begin{array}{l} -2 \leq x \leq 2 \\ y \geq 0 \\ x^2 + y^2 = 4 \end{array} \right.$
 dei pt del pn

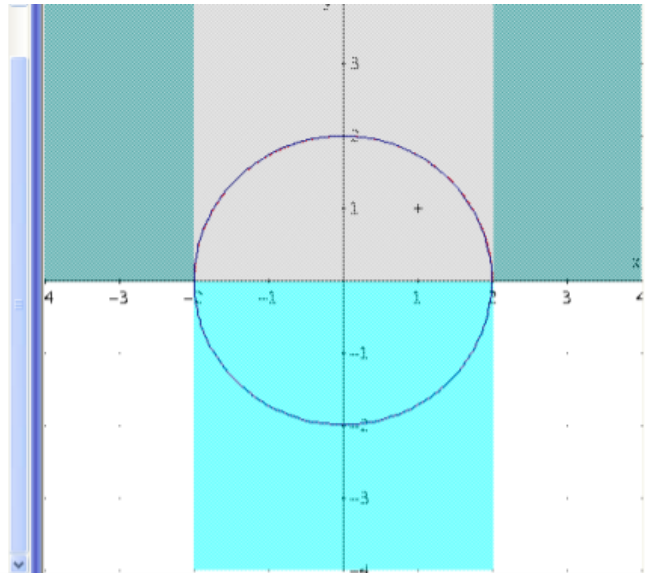
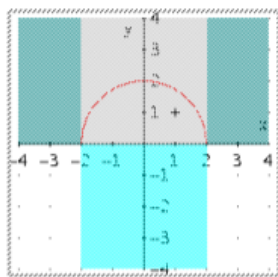


Comp. el sempiano compreso le frontiere

$x^2 + y^2 = 4$ cf con centro (0;0) e r=2

```
#2: 4 - x^2 >= 0
#3: SOLVE(4 - x^2 >= 0, x)
#4: -2 <= x <= 2
#5: y >= 0
#6: y >= 0 & -2 <= x <= 2
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#7: $x^2 + y^2 = 4$

$\text{dominio} = \text{ce} : -2 \leq x \leq 2$
 $D = [-2; 2]$
 $D = \{x \in \mathbb{R} \mid -2 \leq x \leq 2\}$

#2: $4 - x^2 \geq 0$
 #3: SOLVE($4 - x^2 \geq 0, x$)
 #4: $-2 \leq x \leq 2$
 #5: $y \geq 0$
 #6: $y \geq 0 \wedge -2 \leq x \leq 2$

#7: $\begin{matrix} 2 & 2 \\ x & + & y & = & 4 \end{matrix}$


$C = [0; 2] = \{y \in \mathbb{R} \mid y = f(x)\}$

dominio è dato dalle proiezione dei pti
 del grafico delle funzione sull'asse delle x

Oggetti liberi

- a: $x = -2$
- b: $x = 2$
- $f(x) = \text{sqrt}(4 - x^2)$

Oggetti dipendenti



$y = -\sqrt{16-x^2}$ $\in \mathbb{R} \rightarrow y$ $CE \ 16-x^2 \geq 0$

$\textcircled{1} \begin{cases} 16-x^2 \geq 0 \\ y \leq 0 \end{cases}$

$\textcircled{2} \begin{cases} y^2 = 16-x^2 \end{cases}$

$\textcircled{1} \begin{cases} 16-x^2 \geq 0 \\ -x^2 \geq -16 \\ x^2 \leq 16 \\ -4 \leq x \leq 4 \end{cases}$

$\textcircled{2} \begin{cases} y^2 + x^2 = 16 \end{cases}$
 CENTRO 0
 RAGGIO 4

$D: [-4; 4] \quad C = [-4; 0]$

ES 2a

$y = -\sqrt{4x-x^2}$

$\textcircled{1} \begin{cases} 4x-x^2 \geq 0 \\ y \leq 0 \end{cases}$

$\textcircled{2} \begin{cases} y^2 = 4x-x^2 \end{cases}$

$\textcircled{1} \begin{cases} x(4-x) \geq 0 \end{cases}$

$\frac{0}{-} \begin{matrix} + \\ - \end{matrix} \frac{4}{-} \quad 0 \leq x \leq 4$

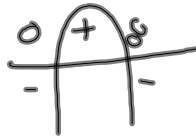
$\textcircled{2} \begin{cases} y^2 + x^2 - 4x = 0 \\ r=2 \\ C(2;0) \end{cases}$

$D: [0; 4] \quad C: [-2; 0]$

$$y = \sqrt{8x - x^2}$$

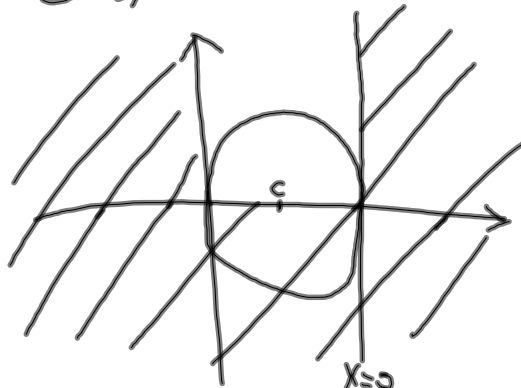
$$\begin{cases} ① & 8x - x^2 \geq 0 \\ ② & y \geq 0 \\ ③ & y^2 = 8x - x^2 \end{cases}$$

$$① \quad x(8-x) \geq 0$$



$$0 \leq x \leq 8$$

$$\begin{aligned} ③ & y^2 + x^2 - 8x = 0 \\ & C(4; 0) \\ & r = 4 \end{aligned}$$



$$D[0; 8] \subset [0; 4]$$

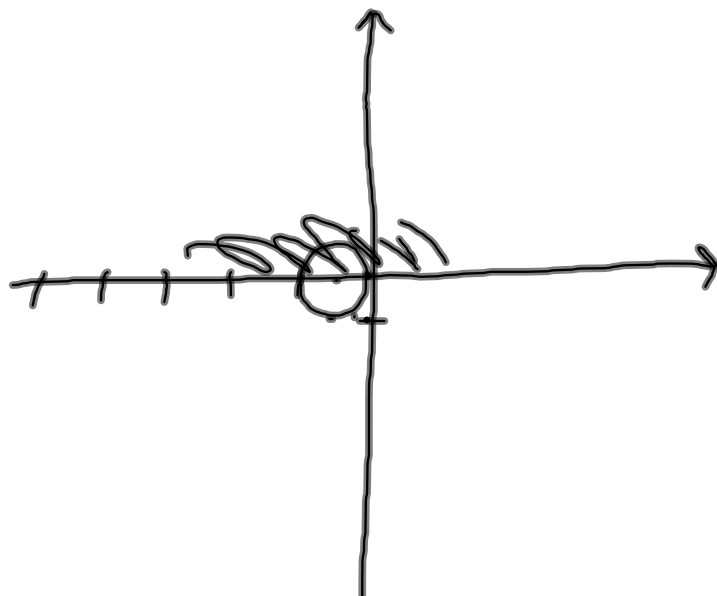
$$c) \quad y = -\sqrt{-x - x^2}$$

$$\begin{cases} ① & -x - x^2 \geq 0 \\ & y \leq 0 \\ ② & y^2 = -x - x^2 \end{cases}$$

$$\begin{aligned} -x(1+x) \geq 0 & \quad -1 \leq x \leq 0 \quad -\frac{1}{2} \leq y \leq 0 \\ \uparrow & \quad \uparrow \\ 0 & \quad -1 \end{aligned}$$

$$y^2 = -x - x^2; \quad x^2 + y^2 + x = 0 \quad r = \frac{1}{2}$$

$$D[-1; 0] \quad C[-\frac{1}{2}; 0]$$



$$d: y = \sqrt{16 - x^2} + 1$$

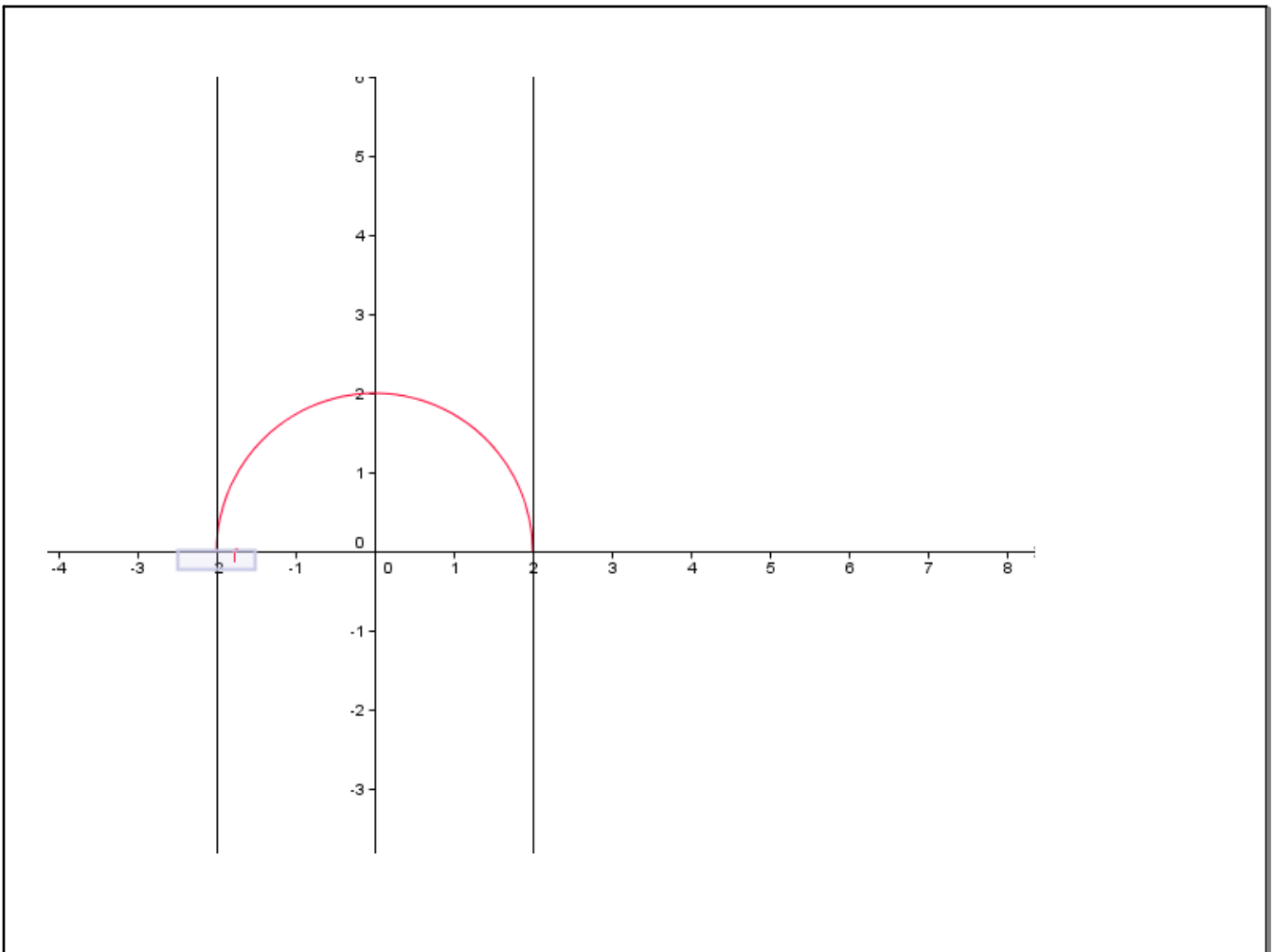


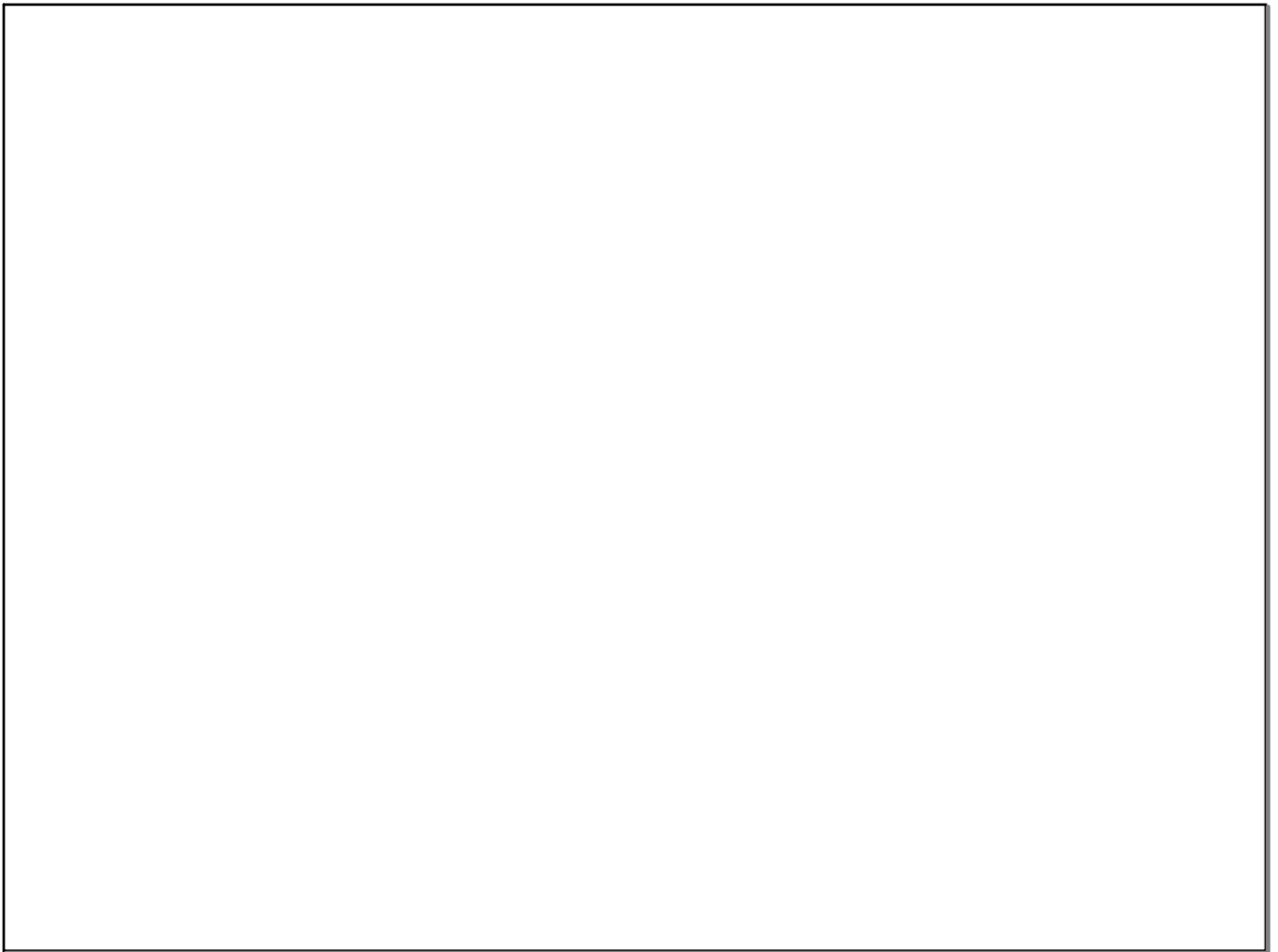
$$\begin{cases} \textcircled{1} & 16 - x^2 \geq 0 \\ \textcircled{2} & y - 1 \geq 0 \\ \textcircled{3} & y = 16 - x^2 + 1 + 2 \cdot \sqrt{16 - x^2} \end{cases}$$

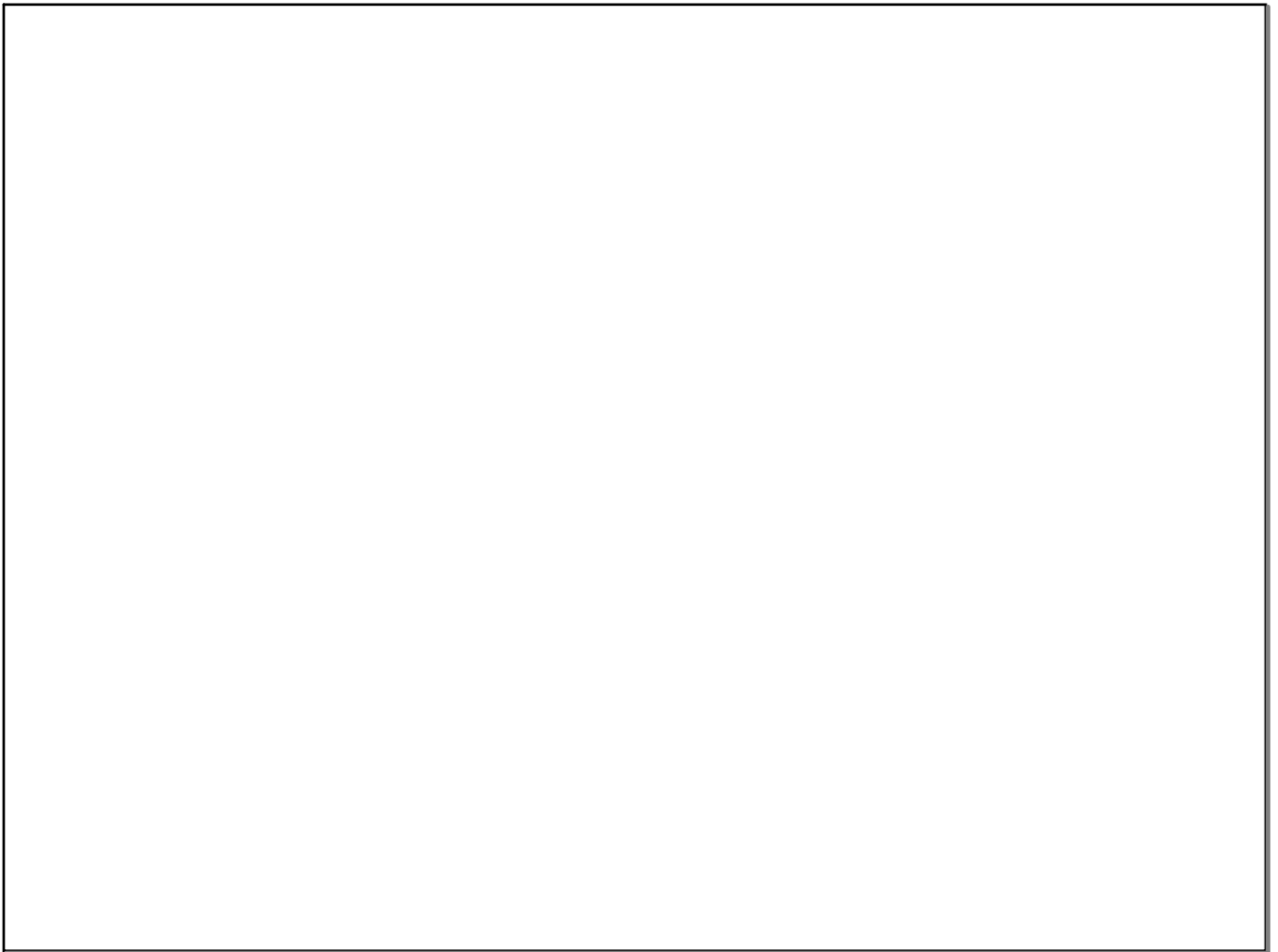
$$\textcircled{1} \quad x^2 \leq 16$$

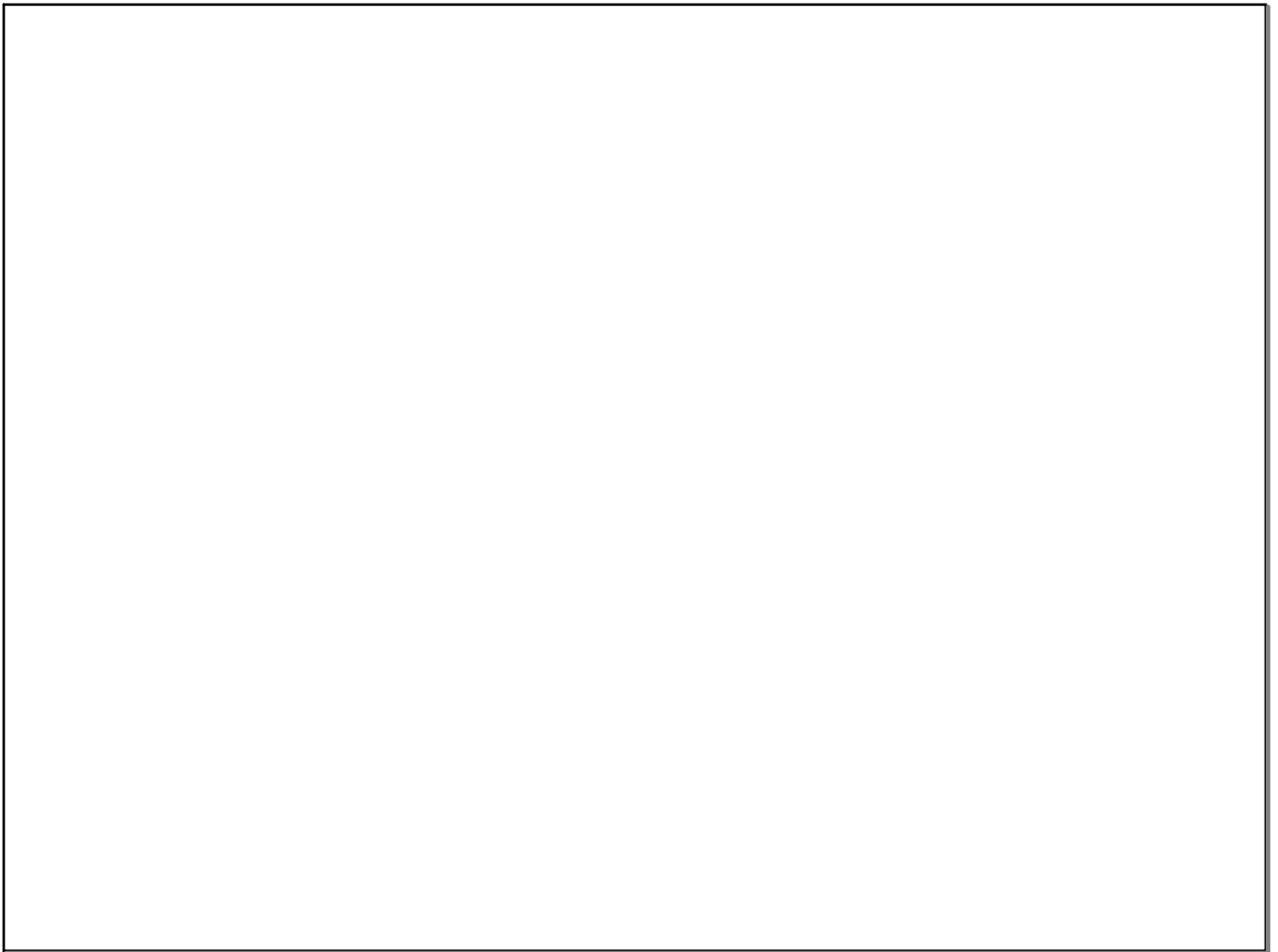
$$-4 \leq x \leq 4$$

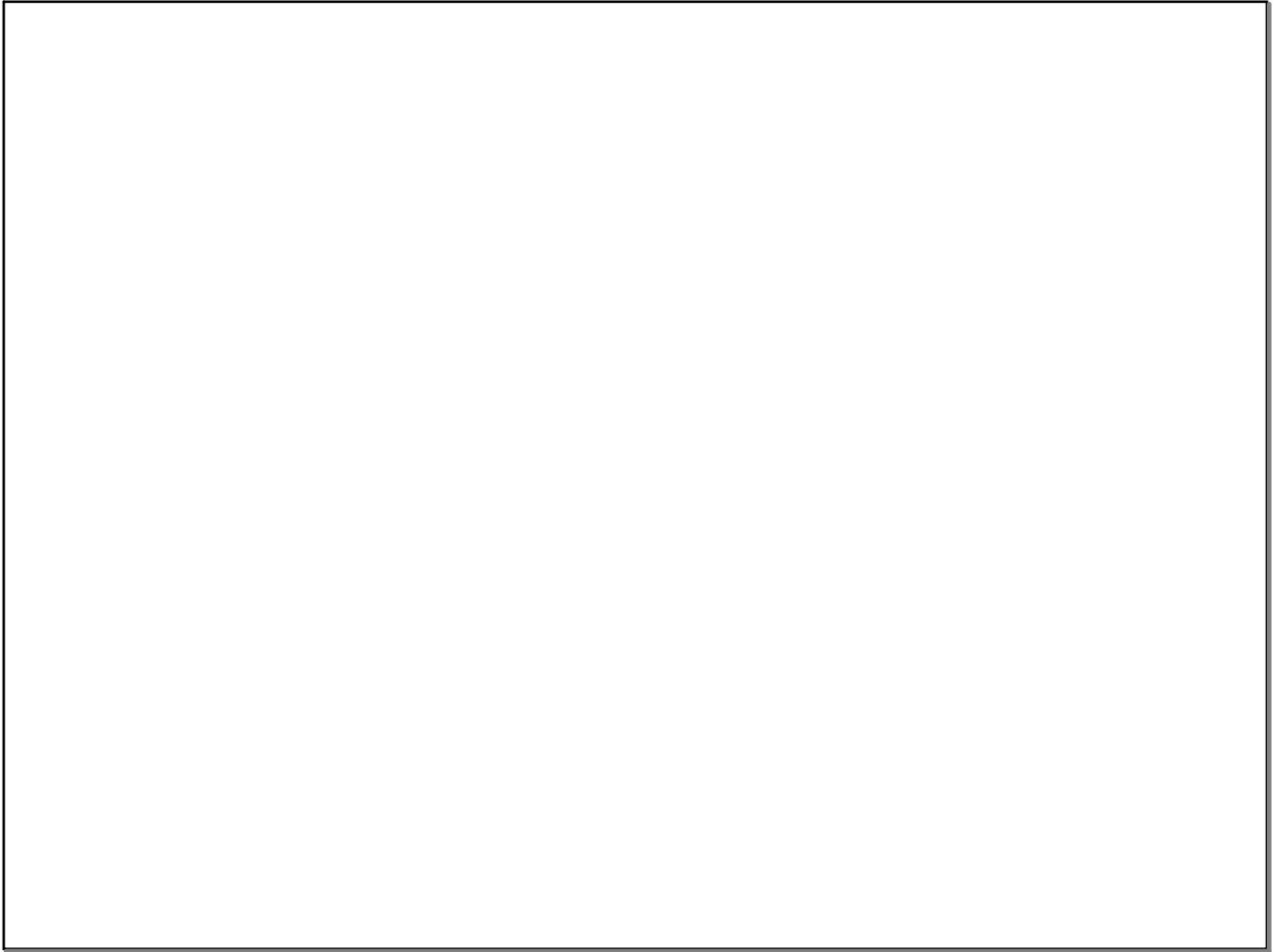
$$\textcircled{2} \quad y \geq 1$$

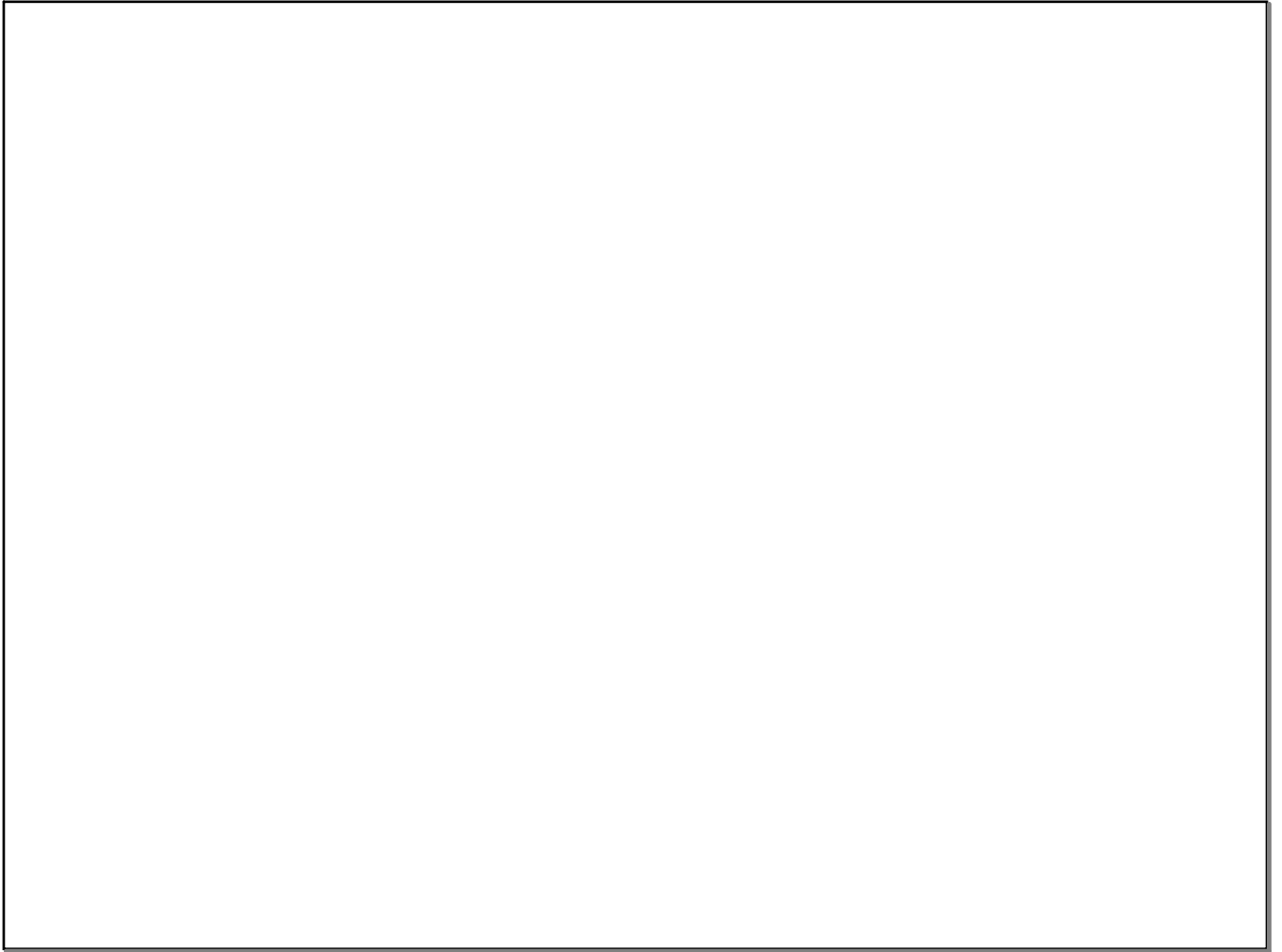












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