

Es. 2.30 $\text{dist}((1,2),(-2,3)) = \sqrt{10}$

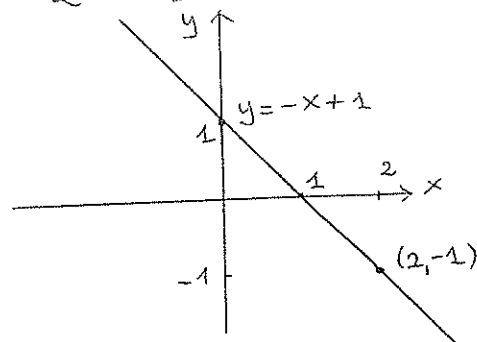
Es. 2.31 retta per $(2,-1)$ e $(-1,0)$: $y = -\frac{1}{3}x - \frac{1}{3}$

Es. 2.32 retta per $(-2,1)$ e $(-2,3)$: $x = -2$

Es. 2.33 retta per $(1,2)$ e $(-1,1)$: $y = \frac{3}{2}x + \frac{1}{2}$

$$\cap \text{ con } y = -\frac{1}{3}x - \frac{1}{3} \quad \left\{ \begin{array}{l} y = \frac{3}{2}x + \frac{1}{2} \\ y = -\frac{1}{3}x - \frac{1}{3} \end{array} \right\} \dots \left\{ \begin{array}{l} \frac{3}{2}x + \frac{1}{2} = -\frac{1}{3}x - \frac{1}{3} \end{array} \right.$$

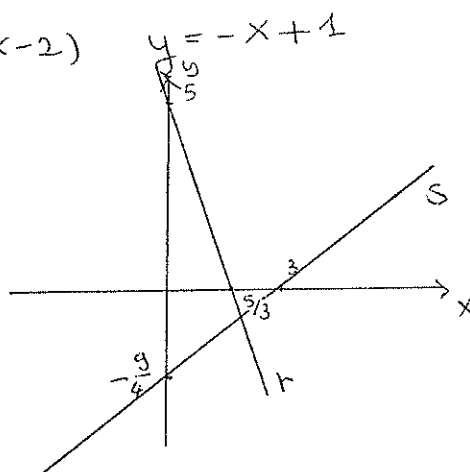
$$\left\{ \begin{array}{l} x = -\frac{5}{11} \\ y = -\frac{2}{11} \end{array} \right. \quad \text{INTERS. } \left(-\frac{5}{11}, -\frac{2}{11}\right)$$



Es. 2.34 $y = -1 - 1(x-2)$ $y = -x + 1$

Es. 2.35 r $y = -3x + 5$

s $y = \frac{3}{4}x - \frac{9}{4}$



Es. 2.36 $\parallel y = -\frac{1}{3}x - \frac{1}{3} \Rightarrow m = -\frac{1}{3} \quad y = 2 - \frac{1}{3}(x-1) \quad y = -\frac{1}{3}x + \frac{7}{3}$

Es. 2.37 $\perp y = -\frac{1}{3}x + \frac{7}{3} \Rightarrow m = 3 \quad y = 2 + 3(x-1) \quad y = 3x - 1$

Es. 2.38 $\text{dist}((1,1), x = -2) = 3$

$$\text{dist}((1,1), y = -x + 1) = \frac{|ax_0 + by_0 + c|}{\sqrt{a^2 + b^2}} = \frac{|1 + 1 - 1|}{\sqrt{2}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$ax + by + c = 0 \\ a = 1 \quad b = 1 \quad c = -1$$

(si vedeva anche geometricamente dal disegno che è la metà della diagonale di un quadrato di lato 1)

Es. 2.39 $x^2 + y^2 = 4$

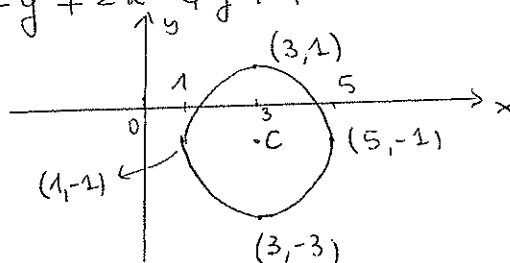
Es. 2.40 $(x+1)^2 + (y-2)^2 = 1$

$$x^2 + y^2 + 2x - 4y + 4 = 0$$

Es. 2.41 $x^2 + y^2 - 6x + 2y + 6 = 0$

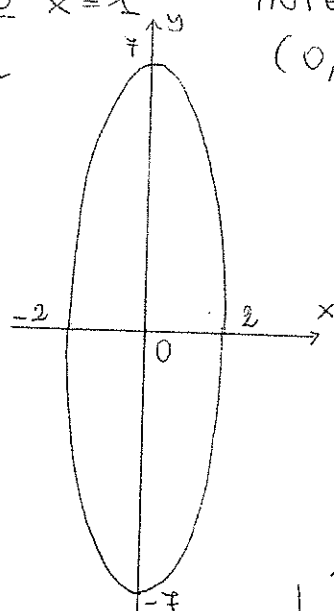
$$(x-3)^2 + (y+1)^2 = 4$$

$$C(3, -1) \quad R = 2$$



Es. 2.42 $\begin{cases} y = x+2 \\ (x-1)^2 + (y-2)^2 = 1 \end{cases} \begin{cases} \dots \\ x^2 - 2x + 1 + x^2 = 1 \end{cases} \begin{cases} \dots \\ 2x^2 - 2x = 0 \end{cases}$

$\begin{cases} \dots \\ x^2 - x = 0 \end{cases} \begin{cases} x=0 \text{ o } x=1 \\ y=x+2 \end{cases}$ INTERSEZIONI
(0,2) (1,3)

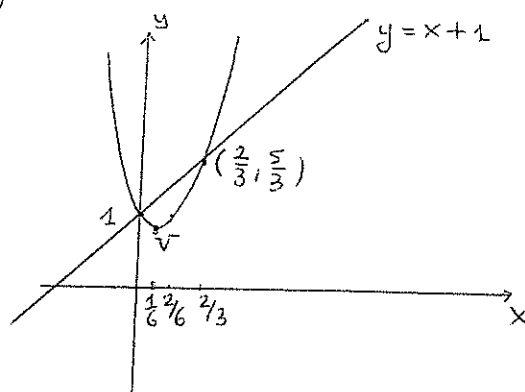


Es. 2.45 $\frac{x^2}{4} + \frac{y^2}{49} = 1$

Es. 2.48 $\sqrt{(\frac{1}{6}, \frac{11}{12})}$ no nome x
risalta verso l'alto

$\begin{cases} y = 3x^2 - x + 1 \\ y = x + 1 \end{cases} \begin{cases} y = x + 1 \\ 3x^2 - x + 1 = x + 1 \end{cases}$

$\begin{cases} 3x^2 - 2x = 0 \\ y = x + 1 \end{cases} \begin{cases} x=0 \text{ o } x=\frac{2}{3} \\ y = x + 1 \end{cases}$



INTERSE. (0,1) $(\frac{2}{3}, \frac{5}{3})$

Es. 2.50 $y = ax^2 + bx + c$ per (0,0) $\Rightarrow c=0$

per (4,0) $\begin{cases} 16a + 4b = 0 \\ a + b = 3 \end{cases} \begin{cases} b = 3 - a \\ 16a + 4(3 - a) = 0 \end{cases}$

$\begin{cases} b = \dots \\ 12a = -12 \end{cases} \begin{cases} a = -1 \\ b = 4 \end{cases}$

$y = -x^2 + 4x$