



$$m = \frac{\Delta y}{\Delta x}$$

$$x^2 + y^2 + 2x - 3y - \frac{3}{4} = 0$$

int. asse x

$$\begin{cases} y = 0 \\ x^2 + y^2 + 2x - 3y - \frac{3}{4} = 0 \Rightarrow x^2 + 2x - \frac{3}{4} = 0 \end{cases}$$

$$\Delta = 4 + 3 = 7$$

$$x_{1,2} = \frac{-2 \pm \sqrt{7}}{2}$$

oppure

$$4x^2 + 8x - 3 = 0$$

$$\Delta = 64 + 48 = 112$$

$$x_{1,2} = \frac{-8 \pm \sqrt{112}}{8} = \frac{-8 \pm 4\sqrt{7}}{8} = \frac{4(-2 \pm \sqrt{7})}{8} =$$

le intersezioni sono $\left(\frac{-2-\sqrt{7}}{2}; 0\right)$ $\left(\frac{-2+\sqrt{7}}{2}; 0\right)$
 $\nearrow \sim -2,32$ $\nwarrow 0,32$

intersezione asse y

$$\begin{cases} x = 0 \\ y^2 - 3y - \frac{3}{4} = 0 \end{cases} \quad \Delta = 9 + 3 = 12 \quad y_{1,2} = \frac{3 \pm \sqrt{12}}{2} = \frac{3 \pm 2\sqrt{3}}{2}$$

le intersez. con l'asse y sono $\left(0; \frac{3-2\sqrt{3}}{2}\right)$ $\left(0; \frac{3+2\sqrt{3}}{2}\right)$

intersez. della cir. con retta $y = \frac{1}{2}x + 1$

$$\begin{cases} x^2 + y^2 + 2x - 3y - \frac{3}{4} = 0 \\ y = \frac{1}{2}x + 1 \end{cases}$$

$$x^2 + \frac{1}{4}x^2 + 1 + x + 2x - \frac{3}{2}x - 3 - \frac{3}{4} = 0$$

$$\frac{5}{4}x^2 + \frac{3}{2}x - \frac{11}{4} = 0$$

$$5x^2 + 6x - 11 = 0$$

$$\Delta = 36 + 220 = 256 = 16^2$$

$$x_{1,2} = \frac{-6 \pm 16}{10} = \begin{cases} \frac{10}{10} = 1 \\ -\frac{22}{10} = -\frac{11}{5} \end{cases}$$

ora sostituiamo x_1 e x_2 nella retta.

$$\begin{cases} x = 1 \\ y = \frac{1}{2}x + 1 \Rightarrow y = \frac{3}{2} \end{cases} \quad \vee$$

$$\begin{cases} x = -\frac{11}{5} \\ y = \frac{1}{2}x + 1 \Rightarrow y = -\frac{11}{10} + 1 = -\frac{1}{10} \end{cases}$$

$$A\left(1; \frac{3}{2}\right)$$

$$B\left(-\frac{11}{5}; -\frac{1}{10}\right)$$