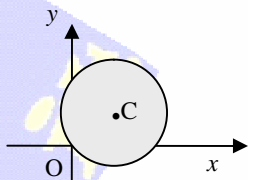
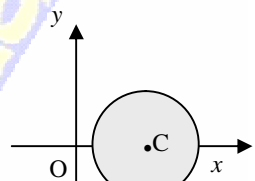
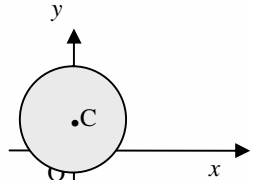
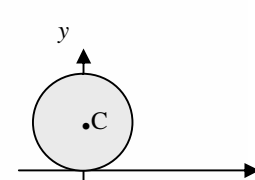
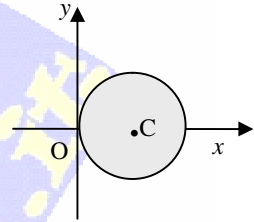
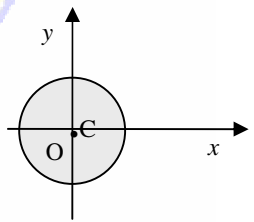
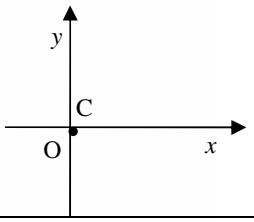
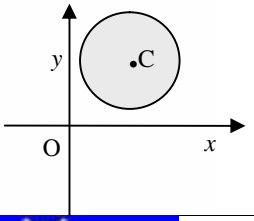


### Vari casi dell'equazione della circonferenza

| <i>a</i> | <i>b</i> | <i>c</i> | EQUAZIONE                 | CENTRO                                    | RAGGIO                                     | GRAFICO   | NOTE  |
|----------|----------|----------|---------------------------|---|--|---|---|
| $\neq 0$ | $\neq 0$ | $= 0$    | $x^2 + y^2 + ax + by = 0$ | $\left(-\frac{a}{2}; -\frac{b}{2}\right)$ | $r = \frac{1}{2}\sqrt{a^2 + b^2}$          |    | Circonferenza passante per l'origine                      |
| $\neq 0$ | $= 0$    | $\neq 0$ | $x^2 + y^2 + ax + c = 0$  | $\left(-\frac{a}{2}; 0\right)$            | $r = \frac{1}{2}\sqrt{a^2 - 4c}$           |    | Circonferenza con centro sull'asse x                      |
| $= 0$    | $\neq 0$ | $\neq 0$ | $x^2 + y^2 + by + c = 0$  | $\left(0; -\frac{b}{2}\right)$            | $r = \frac{1}{2}\sqrt{b^2 - 4c}$           |   | Circonferenza con centro sull'asse y                      |
| $= 0$    | $\neq 0$ | $= 0$    | $x^2 + y^2 + by = 0$      | $\left(0; -\frac{b}{2}\right)$            | $r = \frac{1}{2}\sqrt{b^2} = \frac{1}{2}b$ |  | Circonferenza passante per l'origine e centro sull'asse y |

### Vari casi dell'equazione della circonferenza

| <i>a</i> | <i>b</i> | <i>c</i> | EQUAZIONE  | CENTRO                                    | RAGGIO   | GRAFICO   | NOTE  |
|----------|----------|----------|--|---|--|---|---|
| $\neq 0$ | $= 0$    | $= 0$    | $x^2 + y^2 + ax = 0$   | $\left(-\frac{a}{2}; 0\right)$            | $r = \frac{1}{2}\sqrt{a^2} = \frac{1}{2}a$                 |    | Circonferenza passante per l'origine e centro sull'asse x     |
| $= 0$    | $= 0$    | $\neq 0$ | $x^2 + y^2 + c = 0$<br>( $x^2 + y^2 = -c$ P<br>P $x^2 + y^2 = r^2$ ) | $(0; 0)$                                  | $r = \frac{1}{2}\sqrt{-4c} = \sqrt{-c}$<br>cioè $r^2 = -c$ |    | Circonferenza con centro nell'origine                         |
| $= 0$    | $= 0$    | $= 0$    | $x^2 + y^2 = 0$  | $(0; 0)$                                  | $r = 0$  |   | Circonferenza degenera con centro nell'origine e raggio nullo |
| $\neq 0$ | $\neq 0$ | $\neq 0$ | $x^2 + y^2 + ax + by + c = 0$  | $\left(-\frac{a}{2}; -\frac{b}{2}\right)$ | $r = \frac{1}{2}\sqrt{a^2 + b^2 - 4c}$                     |  | Circonferenza generica (non riconducibile ai casi precedenti) |