

# Funzioni definite graficamente

## Periodo 3 - UdA 1

Rappresentare graficamente le seguenti funzioni continue senza tratti orizzontali:

- |     |                                                |                                               |                                          |
|-----|------------------------------------------------|-----------------------------------------------|------------------------------------------|
| 1.  | $f : ]0, 5[ \longrightarrow \mathbb{R}$        | $\lim_{x \rightarrow 0} f(x) = +\infty$       | $\lim_{x \rightarrow 5} f(x) = +\infty$  |
| 2.  | $f : ]-\infty, -2] \longrightarrow \mathbb{R}$ | $\lim_{x \rightarrow -\infty} f(x) = 0$       | $f(-2) = 0$                              |
| 3.  | $f : [-3, 0] \longrightarrow \mathbb{R}$       | $f(-3) = -2$                                  | $f(0) = -3$                              |
| 4.  | $f : ]-\infty, 0[ \longrightarrow \mathbb{R}$  | $\lim_{x \rightarrow -\infty} f(x) = +\infty$ | $\lim_{x \rightarrow 0} f(x) = +\infty$  |
| 5.  | $f : ]-3, 0[ \longrightarrow \mathbb{R}$       | $\lim_{x \rightarrow -3} f(x) = +\infty$      | $\lim_{x \rightarrow 0} f(x) = 0$        |
| 6.  | $f : ]2, +\infty[ \longrightarrow \mathbb{R}$  | $\lim_{x \rightarrow 2} f(x) = -3$            | $\lim_{x \rightarrow +\infty} f(x) = -3$ |
| 7.  | $f : ]-\infty, -1[ \longrightarrow \mathbb{R}$ | $\lim_{x \rightarrow -\infty} f(x) = -\infty$ | $\lim_{x \rightarrow -1} f(x) = -2$      |
| 8.  | $f : ]-3, -1[ \longrightarrow \mathbb{R}$      | $\lim_{x \rightarrow -3} f(x) = 0$            | $\lim_{x \rightarrow -1} f(x) = 0$       |
| 9.  | $f : ]1, 4[ \longrightarrow \mathbb{R}$        | $\lim_{x \rightarrow 1} f(x) = +\infty$       | $\lim_{x \rightarrow 4} f(x) = 1$        |
| 10. | $f : [1, +\infty[ \longrightarrow \mathbb{R}$  | $f(1) = 0$                                    | $\lim_{x \rightarrow +\infty} f(x) = 5$  |
| 11. | $f : ]-\infty, -3[ \longrightarrow \mathbb{R}$ | $\lim_{x \rightarrow -\infty} f(x) = 0$       | $\lim_{x \rightarrow -3} f(x) = +\infty$ |
| 12. | $f : ]0, 5[ \longrightarrow \mathbb{R}$        | $\lim_{x \rightarrow 0} f(x) = -\infty$       | $\lim_{x \rightarrow 5} f(x) = -\infty$  |