

Limiti nelle funzioni reali

Periodo 3 - UdA 1

Tracciare i grafici delle seguenti funzioni in modo che non ci siano tratti orizzontali

1. $f(0) = 0 \quad \lim_{x \rightarrow 5^-} f(x) = -1 \quad \lim_{x \rightarrow 5^+} f(x) = 5 \quad \lim_{x \rightarrow -\infty} f(x) = 0 \quad \lim_{x \rightarrow +\infty} f(x) = 2$
2. $\lim_{x \rightarrow -3^-} f(x) = 5 \quad \lim_{x \rightarrow -3^+} f(x) = -2 \quad f(0) = -2 \quad \lim_{x \rightarrow -\infty} f(x) = 3 \quad \lim_{x \rightarrow +\infty} f(x) = -4$
3. $\lim_{x \rightarrow -2^-} f(x) = 3 \quad \lim_{x \rightarrow -2^+} f(x) = -2 \quad f(0) = -2 \quad \lim_{x \rightarrow -\infty} f(x) = +\infty \quad \lim_{x \rightarrow +\infty} f(x) = 0$
4. $f(0) = 0 \quad \lim_{x \rightarrow 2^-} f(x) = -\infty \quad \lim_{x \rightarrow 2^+} f(x) = 0 \quad \lim_{x \rightarrow -\infty} f(x) = 0 \quad \lim_{x \rightarrow +\infty} f(x) = -\infty$
5. $\lim_{x \rightarrow -3^-} f(x) = 4 \quad \lim_{x \rightarrow -3^+} f(x) = 0 \quad f(0) = 5 \quad \lim_{x \rightarrow -\infty} f(x) = 0 \quad \lim_{x \rightarrow +\infty} f(x) = 5$
6. $f(0) = 3 \quad \lim_{x \rightarrow 4^-} f(x) = 3 \quad \lim_{x \rightarrow 4^+} f(x) = +\infty \quad \lim_{x \rightarrow -\infty} f(x) = 0 \quad \lim_{x \rightarrow +\infty} f(x) = +\infty$
7. $\lim_{x \rightarrow -5^-} f(x) = 3 \quad \lim_{x \rightarrow -5^+} f(x) = +\infty \quad f(0) = 0 \quad \lim_{x \rightarrow -\infty} f(x) = +\infty \quad \lim_{x \rightarrow +\infty} f(x) = 0$
8. $\lim_{x \rightarrow 0^-} f(x) = 0 \quad \lim_{x \rightarrow 0^+} f(x) = -5 \quad f(3) = -4 \quad \lim_{x \rightarrow -\infty} f(x) = 3 \quad \lim_{x \rightarrow +\infty} f(x) = -4$
9. $f(-4) = 1 \quad \lim_{x \rightarrow 0^-} f(x) = 4 \quad \lim_{x \rightarrow 0^+} f(x) = 1 \quad \lim_{x \rightarrow -\infty} f(x) = +\infty \quad \lim_{x \rightarrow +\infty} f(x) = 4$
10. $f(-4) = -4 \quad \lim_{x \rightarrow 0^-} f(x) = -4 \quad \lim_{x \rightarrow 0^+} f(x) = 1 \quad \lim_{x \rightarrow -\infty} f(x) = -\infty \quad \lim_{x \rightarrow +\infty} f(x) = 3$
11. $f(0) = 3 \quad \lim_{x \rightarrow 3^-} f(x) = +\infty \quad \lim_{x \rightarrow 3^+} f(x) = -3 \quad \lim_{x \rightarrow -\infty} f(x) = 3 \quad \lim_{x \rightarrow +\infty} f(x) = -1$
12. $\lim_{x \rightarrow 0^-} f(x) = +\infty \quad \lim_{x \rightarrow 0^+} f(x) = 0 \quad f(4) = -2 \quad \lim_{x \rightarrow -\infty} f(x) = 3 \quad \lim_{x \rightarrow +\infty} f(x) = -2$