Asintoti

PASSED

determinare le equazioni degli asintoti delle seguenti funzioni

1	$y = \frac{2x+1}{x-3}$	$x = 3,\ y = 2$
2	$y = \frac{3x+4}{1-x^2}$	$x = \pm 1,\ y = 0$
3	$y = \frac{2x^3}{x^3-8}$	$x = 2,\ y = 2$
4	$y = \frac{x^3+1}{2x^2-5}$	$x = \pm\frac{\sqrt{10}}{2},\ y = \frac{1}{2}x$
5	$y = \frac{x^2+3}{x}$	$x = 0,\ y = x$
6	$y = \frac{3x^2+x-5}{x^2-4}$	$x = \pm 2,\ y = 3$
7	$y = \frac{x^2-9}{3x^2-9x+9}$	$y = \frac{1}{3}$
8	$y = \frac{x^3}{x^2-4}$	$x = \pm 2,\ y = x$
9	$y = \frac{x^3+3x-2}{x^2-9}$	$x = \pm 3,\ y = x$
10	$y = \frac{(x-6)(x-3)}{x(x-8)(x-4)}$	$x = 0,\ x = 8,$ $x = 4,\ y = 0$

11	$y = \dfrac{x^4 - 3}{x^3 - 2x^2 - 8x + 9}$	$x = 1, \quad x = \dfrac{1 \pm \sqrt{37}}{2}, \quad y = x + 2$
12	$y = \dfrac{x}{\sqrt{2 + x^2}}$	$y = \pm 1$
13	$y = \dfrac{\sqrt{x^2 + 2x - 4}}{x + 1}$	$y = 1, \quad y = -1$
14	$y = x + \sqrt{x^2 + x}$	$y = 2x + \dfrac{1}{2}$
15	$y = 2x + \sqrt{x^2 - 1}$	$y = x, \quad y = 3x$
16	$y = \dfrac{-\lvert x \rvert}{x^2 + \lvert x \rvert}$	$y = 0$
17	$y = \dfrac{3x - \lvert x + 4 \rvert - 2}{4 - \lvert 1 - x^2 \rvert}$	$x = \pm\sqrt{5}, \quad y = 0$
18	$y = (x + 1)\left(\dfrac{1}{2}\right)^{(x+1)}$	$x = -1, \quad y = x + 1 - ln2$
19	$y = e^{\frac{x-1}{2x-3}}$	$x = \dfrac{3}{2}, \quad y = \sqrt{e}$
20	$y = xe^{\frac{1}{x}}$	$x = 0, \quad y = x + 1$

21	$y = e^{x^2-1}$	$y = 0$
22	$y = x^2\, e^x$	$y = 0$
23	$y = \dfrac{2^x - 5}{4 - 3 \cdot 2^x}$	$x = \log_2 \frac{4}{3},\ y = -\frac{5}{4}$, $y = -\dfrac{1}{3}$
24	$y = ln \dfrac{x^2 - 3}{x^2 - 4}$	$x = \pm 2,\ y = 0$
25	$y = \dfrac{ln\, x}{x^2}$	$x = 0,\quad y = 0$
26	$y = \dfrac{1 + ln\, x}{ln\, x - 2}$	$x = e^2,\quad y = 1$
27	$y = \dfrac{ln\, x}{\sqrt{x}}$	$x = 0,\ y = 0$
28	$y = ln\, ln(3x - 2)$	$x = 1$
29	$y = \dfrac{sin\, x}{x}$	$y = 0$
30	$y = arctan \dfrac{2x}{x^2 - 1}$	$y = 0$
31	$y = ln\, arctan\, x$	$x = 0,\quad y = ln \dfrac{\pi}{2}$

32	$y = arctan\, ln\, x$	$y = \frac{\pi}{2}$
33	$y = arcsin \frac{x^2 - 9}{x^2 - 4}$	$y = \frac{\pi}{2}$
34	$y = arccos \frac{2x}{x^2 + 1}$	$y = \frac{\pi}{2}$