

Zad.1 Naskicuj wykres funkcji. Zaznacz miejsca zerowe, przecięcia z osią Oy , asymptoty - o ile funkcja je posiada.

1. $y = x$
2. $y = -x$
3. $y = |x|$
4. $y = \frac{1}{x}$
5. $y = -\frac{1}{x}$
6. $y = \frac{1}{x^2}$
7. $y = -\frac{1}{x^2}$
8. $y = x^2$
9. $y = -x^2$
10. $y = -x^4$
11. $y = x^3$
12. $y = -x^3$
13. $y = \sqrt{x}$
14. $y = \frac{1}{\sqrt{x}}$
15. $y = -\sqrt{x}$
16. $y = -\sqrt{-x}$
17. $y = \sqrt[3]{x}$
18. $y = \frac{1}{\sqrt[3]{x}}$
19. $y = \sqrt{1-x}$
20. $y = \sqrt{x+4}$
21. $y = \frac{1}{\sqrt{x-1}}$
22. $y = \frac{1}{\sqrt[3]{x}} + 1$
23. $y = 1 - \sqrt[3]{x}$
24. $y = \frac{1}{x} - 1$
25. $y = \ln x$
26. $y = \log x$
27. $y = \log_{\frac{1}{2}} x$
28. $y = \log_3 |x|$
29. $y = |\log_3 x|$
30. $y = \left| \log_3 |x| \right|$
31. $\log_{\frac{1}{2}} |x|$
32. $y = \left| \log_{\frac{1}{2}} |x| \right|$
33. $y = \log_2(x+1)$
34. $y = \log_2 x + 1$
35. $y = \log_{\frac{1}{2}}(x-1) - 1$
36. $y = e^x$
37. $y = \left(\frac{1}{2}\right)^x$
38. $y = \left(\frac{1}{3}\right)^{x+1}$
39. $y = 2^{x-1}$
40. $y = e^{x-1} + 1$
41. $y = \left(\frac{1}{2}\right)^x - 1$
42. $y = \sin x$
43. $y = \cos x$
44. $y = \operatorname{tg} x$
45. $y = \operatorname{ctg} x$
46. $y = 2 \sin 2x$
47. $y = \frac{1}{2} \cos 2x$
48. $y = |\sin x|$
49. $y = |\operatorname{tg} x|$
50. $y = |\operatorname{ctg} x|$
51. $y = e^{\ln \sin x}$
52. $y = 2^{\log_2 |\cos 2x|}$
53. $y = \arcsin x$
54. $y = \arccos x$
55. $y = \operatorname{arctg} x$
56. $y = \operatorname{arcctg} x$
57. $y = |\operatorname{arctg} x|$
58. $y = |\operatorname{arcctg} x|$
59. $y = \operatorname{arctg} x + \frac{\pi}{2}$
60. $y = \pi - \operatorname{arcctg} x$
61. $y = \operatorname{arcctg} x - \pi$
62. $y = \operatorname{arctg} |x|$