

1. $y = \frac{\sqrt{16-x^2}}{1-x-x^2}$
2. $y = \ln \frac{3x+2}{7-x}$
3. $y = \sqrt{-x} + \sqrt{4+x}$
4. $y = \frac{1}{\sqrt{x^2-4x}}$
5. $y = \sqrt{x^2-4x+3}$
6. $y = \frac{1}{\ln(1-x)} + \sqrt{x+2}$
7. $y = \frac{3}{4-x^2} + \ln(x^3-x)$
8. $y = \sqrt{x^2-3x+2} + \frac{1}{\sqrt{3+2x-x^2}}$
9. $y = \sqrt{\frac{x-2}{x+2}}$
10. $y = \sqrt{x+1} - \sqrt{3-x}$
11. $y = \frac{\sqrt{4-5x}}{x^2-8}$
12. $y = \frac{\sqrt{3+x}}{x+2\sqrt{x}}$
13. $y = \ln \frac{1-x}{1+2x}$
14. $y = \frac{\sqrt{5x-1}}{x^2+9x+7}$
15. $y = \frac{1}{\sqrt{x^2+3x-5}}$
16. $y = \frac{2+\sqrt{x}}{x^2-x-1}$
17. $y = \frac{\sqrt{x^3-x}}{x-2}$
18. $y = \frac{1}{\sqrt{x^2-4x}}$
19. $y = \sqrt{x^2-4x+3}$
20. $y = \frac{x}{\sqrt{x^2-3x+2}}$
21. $y = \arcsin \frac{x}{4}$
22. $y = \arcsin(x-2)$
23. $y = \arcsin(1-2x)$
24. $y = \arccos \frac{1-2x}{4}$
25. $y = \arcsin \sqrt{2x}$
26. $y = \sqrt{1-|x|}$
27. $y = \frac{1}{\sqrt{|x|-x}}$
28. $y = \frac{1}{\sqrt{x-|x|}}$
29. $y = \sqrt{\ln\left(\frac{5x-x^2}{4}\right)}$
30. $y = \ln \sin x$
31. $y = \arccos \frac{2}{2+\sin x}$
32. $y = \frac{1}{\ln(1-x)} + \sqrt{x+2}$
33. $y = \sqrt{3-x} + \arcsin \frac{3-2x}{5}$
34. $y = \arcsin \frac{x-3}{2} - \ln(4-x)$
35. $y = \sqrt{x} + \sqrt[3]{\frac{1}{x-2}} - \ln(2x-3)$
36. $y = \sqrt{x-1} + 2\sqrt{1-x} + \sqrt{x^2+1}$
37. $y = \frac{3}{4-x^2} + \ln(x^3-x)$
38. $y = \arcsin(2-3x)$
39. $y = \arctan \sqrt{x} - \frac{\sqrt{x-1}}{2-x}$
40. $y = \frac{1}{\sqrt{\sin x}} + \sqrt[3]{\sin x}$
41. $y = \ln \frac{x-5}{x^2-10x+24} - \sqrt[3]{x+5}$
42. $y = \sqrt{\frac{x-2}{x+2}} + \sqrt{\frac{1-x}{\sqrt{1+x}}}$

43.
$$y = \ln \sin(x-3) + \sqrt{16-x^2}$$

44.
$$y = \frac{4}{1 + \sqrt{x^2 - 4}}$$

45.
$$y = \sqrt{\sin x} + \sqrt{16-x^2}$$

46.
$$y = (x^2 + x + 1)^{-\frac{3}{2}}$$

47.
$$y = \ln(\sqrt{x-4} + \sqrt{6-x})$$

48.
$$y = \ln(1 - \ln(x^2 - 5x + 16))$$

1. $|x| \leq 4 \wedge x \neq -\frac{1}{2} \pm \frac{\sqrt{5}}{2}$
2. $\left(-\frac{2}{3}; 7\right)$
3. $\langle -4; 0 \rangle$
4. $(-\infty; 0) \cup (4; \infty)$
5. $(-\infty; -1) \cup (3; \infty)$
6. $\langle -2; 0 \rangle \cup (0; 1)$
7. $(-1; 0) \cup (1; 2) \cup (2; \infty)$
8. $(-1; 1) \cup (2; 3)$
9. $(-\infty; -2) \cup (2; \infty)$
10. $\langle -1; 3 \rangle$
11. $\langle -\infty; -2\sqrt{2} \rangle \cup \left(-2\sqrt{2}; \frac{4}{5}\right)$
12. $\langle -3; 0 \rangle \cup (0; \infty)$
13. $\left(-\frac{1}{2}; 1\right)$
14. $\langle \frac{1}{5}; \infty \rangle$
15. $\left(-\infty; \frac{-3 - \sqrt{29}}{2}\right) \cup \left(\frac{-3 + \sqrt{29}}{2}; \infty\right)$
16. $\langle 0; \frac{1 + \sqrt{5}}{2} \rangle \cup \left(\frac{1 + \sqrt{5}}{2}; \infty\right)$
17. $\langle -1; 0 \rangle \cup (1; 2) \cup (2; \infty)$
18. $(-\infty; 0) \cup (4; \infty)$
19. $(-\infty; 1) \cup (3; \infty)$
20. $(-\infty; 1) \cup (2; \infty)$
21. $\langle -4; 4 \rangle$
22. $\langle 1; 3 \rangle$
23. $\langle 0; 1 \rangle$
24. $\left\langle \frac{3}{2}; \frac{5}{2} \right\rangle$
25. $\langle -1; 1 \rangle$
26. $(-\infty; 0)$
27. **prázdná množina**

28. $\langle 1; 4 \rangle$
29. $\langle 2k\pi; (2k+1)\pi \rangle$
30. $\langle 2k\pi; (2k+1)\pi \rangle$
31. $\langle -2; 0 \rangle \cup \langle 0; 1 \rangle$
32. $\langle -1; 3 \rangle$
33. $\langle 1; 4 \rangle$
34. $\left(\frac{3}{2}; 2\right) \cup (2; \infty)$
35. $x=1$
36. $\langle -1; 0 \rangle \cup \langle 1; 2 \rangle$
37. $\left\langle \frac{1}{3}; 1 \right\rangle$
38. $\langle 1; 2 \rangle \cup (2; \infty)$
39. $\langle 2k\pi; (2k+1)\pi \rangle$
40. $(4; 5) \cup (6; \infty)$
41. *prázdná množina*
42. $(3-2\pi; 3-\pi) \cup (3; 4)$
43. $|x| \geq 2$
44. $\langle -4; -\pi \rangle \cup \langle 0; \pi \rangle$
45. $(-\infty; \infty)$
46. $\langle 4; 6 \rangle$
47. $(2; 3)$