Oblast definisanosti funkcije

Odrediti oblast definisanost finkcije:

1. $y = \dfrac{x+3}{x-5}$
2. $y = \dfrac{x}{x+2}$
3. $y = \dfrac{x}{x^2+4}$
4. $y = \dfrac{x+6}{x^2-4}$
5. $y = \dfrac{3x+4}{x^2-6x+8}$
6. $y = \dfrac{3x-1}{x^2-4x+3}$
7. $y = \dfrac{x^2-16}{x^2-5x+4}$
8. $f(x) = \dfrac{x^2-4x+3}{x^2-6x+5}$
9. $y = \dfrac{x^2-2x}{x^2-3x+2}$
10. $y = \sqrt{x-2}$
11. $y = \sqrt{3x+2}$
12. $y = \sqrt[4]{1-x}$
13. $y = \sqrt{9-x^2}$
14. $y = \sqrt[8]{2x-x^2}$
15. $y = \sqrt[6]{x^2-3x+2}$
16. $y = \sqrt{12+x-x^2}$
17. $y = \sqrt[3]{x^2-5x+6}$
18. $y = \sqrt[5]{5-x}$
19. $y = \sqrt{\dfrac{3+x}{3-x}}$
20. $y = \sqrt{x-\dfrac{1}{x}}$
21. $y = \sqrt{\dfrac{x+5}{4x-x^2-3}}$
22. $y = \sqrt{\dfrac{x^2+3x-4}{6-x-x^2}}$
23. $y = \dfrac{\sqrt{1-x^2}}{x}$
24. $y = \dfrac{2x-1}{\sqrt{x-2}}$
25. $y = \dfrac{x}{\sqrt{2+x-x^2}}$
26. $y = \dfrac{x}{\sqrt{x-3}} + \sqrt{x+1}$
27. $y = 2x - \sqrt{x^2-4x}$
28. $y = \sqrt{x-2} + \sqrt{12+x-x^2}$
29. $y = \sqrt{x-3} + \sqrt[4]{5-x}$
30. $y = 2 - x^2 + \sqrt[5]{x^2-9}$
31. $y = 2^{\frac{x}{x-2}}$
32. $y = 2^{\sqrt{3x-x^2}}$
33. $y = 4^{\sqrt{2x+3}}$
34. $y = \log_2 x$
35. $y = \log_{\frac{1}{2}} x$
36. $y = \log_3 (x+5)$
37. $y = \lg(x-2) + \lg(x+2)$
38. $y = \log(x^2-4)$
39. $y = \log_4 (x^2-4x)$
40. $y = \log(2x^2-x-6)$
41. $y = \log_2 (4-x^2) - \sqrt{36-x^2}$
42. $y = \log_2 (-2x^2+5x+3) + \log_{\frac{1}{3}} (x^2-2x)$
43. $y = \dfrac{\log_2 (3x^2-2x-8)}{x-5}$
44. $y = \dfrac{\sqrt{9-x^2}}{\log(3x-5)}$
45. $y = \log \dfrac{x^2-4x+3}{x^2-6x+8}$
46. $f(x) = \arccos \dfrac{x-2}{2x}$
47. $f(x) = \sqrt{3-x} + \arcsin \dfrac{3-2x}{5}$
48. $y = \sqrt{4-x^2} + \arcsin \dfrac{x+1}{2x+1}$
49. $y = \arccos \dfrac{x}{1+x} + \sqrt{1-x^2}$
50. $y = \sqrt{\log(5x-x^2)}$

51. $y = \log \frac{x-1}{2x+7} + \sqrt{x^2-4} + \sin \frac{x}{2}$

52. $f(x) = \frac{\sqrt{5-x}}{\ln^2(x+2)}$

rešenje:

1. $x \in (-\infty, 5) \cup (5, \infty)$ 2. $x \in (-\infty, -2) \cup (-2, \infty)$ 3. $x \in R$

4. $x \in (-\infty, -2) \cup (-2, 2) \cup (2, \infty)$ 5. $x \in (-\infty, 2) \cup (2, 4) \cup (4, \infty)$
6. $x \in (-\infty, 1) \cup (1, 3) \cup (3, \infty)$

7. $x \in (-\infty, 1) \cup (1, 4) \cup (4, \infty)$
8. $x \in (-\infty, 1) \cup (1, 5) \cup (5, \infty)$ 9. $x \in (-\infty, 1) \cup (1, 2) \cup (2, \infty)$

10. $x \geqslant 2$ 11. $x \geqslant -\frac{2}{3}$ 12. $x \leqslant 1$

13. $x \in [-3, 3]$ 14. $x \in [0, 2]$ 15. $x \in (-\infty, 1] \cup [2, \infty)$

16. $x \in (-\infty, -3] \cup [4, \infty)$ 17. $x \in R$ 18. $x \in R$

19. $x \in (-\infty, -3] \cup (3, \infty)$ 20. $x \in [-1, 0] \cup [1, \infty)$ 21. $x \in (-\infty, -5] \cup (1, 3)$

22. $x \in [-4, -3) \cup [1, 2)$ 23. $x \in [-1, 0) \cup (0, 1]$ 24. $x > 2$

25. $x \in (-1, 2)$ 26. $x \in (3, \infty)$ 27. $x \in [0, 4]$

28. $x \in [2, 4]$ 29. $x \in [3, 5]$ 30. $x \in R$

31. $x \in (2, \infty)$ 32. $x \in [0, 3]$ 33. $x \in [-\frac{3}{2}, \infty)$

34. $x > 0$ 35. $x > 0$ 36. $x > -5$

37. $x \in (2, \infty)$ 38. $x \in (-\infty, 2) \cup (2, \infty)$ 39. $x \in (-\infty, 0) \cup (4, \infty)$

40. $x \in (-\infty, -\frac{3}{2}) \cup (2, \infty)$ 41. $x \in (-2, 2)$ 42. $x \in (-\frac{1}{2}, 0) \cup (2, 3)$

43. $x \in (-\infty, -\frac{4}{3}) \cup (2, 5) \cup (5, \infty)$ 44. $x \in (\frac{5}{3}, 2) \cup (2, 3]$
45. $x \in (-\infty, 1) \cup (2, 3) \cup (4, \infty)$

46. $x \in (-\infty, -2] \cup [\frac{2}{3}, \infty)$ 47. $x \in [-1, 3]$ 48. $x \in [-2, -\frac{2}{3}] \cup [0, 2]$

49. $x \in [-\frac{1}{2}, 1]$ 50. $x \in [1, 4]$ 51. $x \in (-\infty, -\frac{7}{2}) \cup [2, \infty)$

52. $x \in (-2, -1) \cup (-1, 5]$