2016/2017

Vyřešte v $\mathbb{R}$ (ne)rovnici

1. $\left|\frac{5x+2}{2x-3}\right| \geq 1;$

2. $\left|2-x-x^2\right| > |6-x|\,;$

3. $1-|x+2| = \left|x^2+x-2\right|;$

4. $|3-x|+2 = \left|x^2+2x+1\right|;$

5. $\left|\frac{7x}{2x-7}\right| < x$

6. $\left|\frac{2x+1}{x-3}+1\right| < 1$

7. $|x+1|-|2-x| < x^2;$

8. $|5x+2|-|3-x| > x;$

9. $\left|\frac{2-x}{x+1}\right| > 1$

10. $|x+7| = \left|x^2+x-2\right|;$

11. $|x-3|-\left|4-x^2\right| = -5;$

12. $|x+1|+|x+2| < |x+3|\,;$

13. $\frac{|1-2x|+x^2}{2|x-1|+1} = 2;$

14. $\left|\frac{5x-3}{4x+7}\right| \leq 3$

15. $1+|x+2| = \left|x^2+x-1\right|;$

16. $|x+2|-|3-2x| > x;$

17. $\left|\frac{3-x}{x+1}\right| > x$

18. $\left|\frac{7x}{2x-7}\right| < 2$

19. $|x+2|-|3-2x| > 1+|x|\,;$

20. $|x-3|-|4-x| = |5-x|\,;$

21. $\left|x^2-1\right| > |5-x|\,;$

22. $|x-1|-|x-3| = \left|\frac{x}{2}\right|;$

23. $1+2\,|3-4x| = \left|5x^2+6x+7\right|;$

24. $\left|\frac{x+1}{x-1}\right| > 3$

25. $\frac{2-|4-x|}{|x-2|+1} = 3;$

2016/2017

Vyřešte v $\mathbb{R}$ (ne)rovnici

1. $x \in \left(-\infty, -\frac{5}{3}\right\rangle \cup \left\langle \frac{1}{7}, \frac{3}{2}\right) \cup \left(\frac{3}{2}, \infty\right),$
2. $x \in (-\infty, -4) \cup (2, \infty),$
3. $x_1 = -\sqrt{5}, x_2 = -\sqrt{3},$
4. $x_1 = -4, x_2 = 1,$
5. $x \in (7, \infty),$
6. $x \in \left(-\frac{1}{2}, \frac{5}{4}\right),$
7. $x \in (-\infty, 1) \cup (1, \infty),$
8. $x \in (-\infty, -1) \cup \left(\frac{1}{5}, \infty\right),$
9. $x \in (-\infty, -1) \cup \left(-1, \frac{1}{2}\right),$
10. $x_1 = -3, x_2 = 3,$
11. $x_1 = -4, x_2 = 3,$
12. $x \in (-2, 0),$
13. $x_1 = -1 - \sqrt{6}, x_2 = 1,$
14. $x \in \left(-\infty, -\frac{24}{7}\right\rangle \cup, \left\langle -\frac{18}{17}, \infty\right),$
15. $x_1 = -2, x_2 = 2,$
16. $x \in \left(-\frac{1}{2}, \frac{5}{2}\right),$
17. $x \in (-\infty, -1) \cup (-1, 1),$
18. $x \in \left(-\frac{14}{3}, \frac{14}{11}\right),$
19. $x \in (1, 2),$
20. $x_1 = 4, x_2 = 6,$
21. $x \in (-\infty, -3) \cup (2, \infty),$
22. $x_1 = \frac{8}{3}, x_2 = 4,$
23. $x_1 = -\frac{14}{5}, x_2 = 0,$
24. $x \in \left(\frac{1}{2}, 1\right) \cup (1, 2)$
25. nemá řešení,