

6	$\sin x + \sin^2 \frac{x}{2} = \cos^2 \frac{x}{2}$	$\left[-2\pi; -\frac{\pi}{2}\right]$
7	$7\operatorname{tg}^2 x - \frac{1}{\cos x} + 1 = 0$	$\left[-\frac{5\pi}{2}; -\pi\right]$
8	$4\operatorname{tg}^2 x + \frac{3}{\cos^2 x} + 3 = 0$	$\left[\frac{5\pi}{2}; 4\pi\right]$
9	$\cos 2x = \sin\left(\frac{3\pi}{2} - x\right)$	$\left[\frac{3\pi}{2}; \frac{5\pi}{2}\right]$
10	$\cos 2x = \sin\left(x + \frac{\pi}{2}\right)$	$[-2\pi; -\pi]$

11	$2 \sin^2 \left(\frac{3\pi}{2} - x \right) = \cos x$	$\left[-\frac{3\pi}{2}; 0 \right]$
12	$2 \sin^2 \left(\frac{\pi}{2} - x \right) = -\sqrt{3} \cos x$	$\left[-3\pi; -\frac{3\pi}{2} \right]$
13	$-\sqrt{2} \sin \left(-\frac{5\pi}{2} + x \right) \cdot \sin x = \cos x$	$\left[\frac{9\pi}{2}; 6\pi \right]$
14	$9^{x+1} - 2 \cdot 3^{x+2} + 5 = 0$	$\left(\log_3 \frac{3}{2}; \sqrt{5} \right)$
15	$\sin x = \cos \left(\frac{\pi}{2} - 2x \right)$	$\left(-\frac{7\pi}{2}; -2\pi \right]$

16	$2 \cos^2 x + \cos x - 1 = 0$	$\left[-\frac{7\pi}{2}; -2\pi \right)$
17	$2 \sin^2 x + \sin x - 1 = 0$	$\left[-\frac{7\pi}{2}; -2\pi \right]$
18	$\cos 2x - 0,75 + \sin^2 x = 0$	$\left[\frac{3\pi}{2}; 3\pi \right]$
19	$1 + \cos\left(\frac{\pi}{2} + x\right) = \cos 2x$	$\left[-3\pi; -\frac{3\pi}{2} \right)$
20	$\cos^2 x - 0,75 = \cos 2x$	$\left[-\frac{9\pi}{2}; -3\pi \right]$
21	$\cos\left(\frac{\pi}{2} + 2x\right) = \sin x$	$\left[\pi; \frac{5\pi}{2} \right)$

22	$\cos 2x - 0,5 + \sin^2 x = 0$	$\left[\pi; \frac{5\pi}{2} \right]$
23	$\cos 2x + 0,5 = \cos^2 x$	$\left[-2\pi; -\frac{\pi}{2} \right]$
24	$2\sin^2 x - 3\sin x + 1 = 0$	$\left(3\pi; \frac{9\pi}{2} \right]$
25	$\sqrt{\cos^2 x + 15,25 - \cos 2x} = 4$	$\left[-\frac{9\pi}{2}; -3\pi \right]$
26	$9^{\cos^2 x} = 3^{\sin 2x} \cdot 9$	$\left(-2\pi; -\frac{\pi}{2} \right)$
27	$4^{\sin^2 x} = \left(\frac{1}{2} \right)^{\sin 2x} \cdot 4$	$\left(2\pi; \frac{7\pi}{2} \right)$
28	$\log_{\frac{1}{3}} \left(\sqrt{2} \cos x - \sin 2x + 27 \right) = -3$	$\left[-\pi; \frac{\pi}{2} \right]$

29	$\log_5(\cos x - \sin 2x + 25) = 2$	$\left[2\pi; \frac{7\pi}{2} \right]$
30	$16^{\cos^2 x} = \left(\frac{1}{4}\right)^{\sin 2x} \cdot 16$	$\left(-\frac{3\pi}{2}; 0\right)$
31	$25^{\sin^2 x} = 5^{\sin 2x} \cdot 25$	$\left(-\pi; \frac{\pi}{2}\right)$
32	$\sqrt{8,5 + \sin^2 x + \cos 2x} = 3$	$\left[\pi; \frac{5\pi}{2}\right]$
33	$\sqrt{\cos^2 x + 24,75 - \cos 2x} = 5$	$\left[-\frac{7\pi}{2}; -2\pi\right]$
34	$\left(\frac{1}{36}\right)^{\cos^2 x} = 6^{\sin 2x} \cdot \frac{1}{36}$	$\left(\pi; \frac{5\pi}{2}\right)$

35	$\sqrt{3} \sin 2x + \cos 2x + 1 = 0$	$\left[-\frac{5\pi}{2}; -\pi\right]$
36	$\sqrt{3} \sin 2x + 3 \cos 2x = 3$	$\left[\frac{3\pi}{2}; 3\pi\right]$
37	$\cos\left(\frac{3\pi}{2} + 2x\right) = \sqrt{3} \cos x$	$[-4\pi; -3\pi]$
38	$\cos\left(\frac{3\pi}{2} - 2x\right) = \sqrt{3} \sin x$	$[-3\pi; -2\pi]$
39	$\cos\left(\frac{\pi}{2} - 2x\right) = \sqrt{2} \cos x$	$[-6\pi; -5\pi]$
40	$\cos\left(\frac{\pi}{2} + 2x\right) = \sqrt{2} \sin x$	$[-5\pi; -4\pi]$

41	$3 \sin 2x - 4 \cos x + 3 \sin x - 2 = 0$	$\left[-\frac{\pi}{2}; \frac{\pi}{2} \right]$
42	$(\sqrt{3} \cos^2 x + 2 \cos x) \sqrt{1 - 2 \sin x} = 0$	$\left[\frac{\pi}{2}; \frac{5\pi}{2} \right]$
43	$2 \sin 2x = 4 \cos x - \sin x + 1$	$\left[\frac{\pi}{2}; \frac{3\pi}{2} \right]$
44	$\sin x(2 \sin x - 3 \operatorname{ctgx}) = 3$	$\left[-\frac{3\pi}{2}; \frac{\pi}{2} \right]$
45	$\cos x(2 \cos x + \operatorname{tgx}) = 1$	$\left[-\frac{5\pi}{2}; -\frac{\pi}{2} \right]$
46	$\sqrt{2} \sin^3 x - \sqrt{2} \sin x + \cos^2 x = 0$	$\left[-\frac{5\pi}{2}; -\pi \right]$

47	$6 \cos^2 x - 7 \cos\left(\frac{3\pi}{2} - x\right) - 1 = 0$	$\left[2\pi; \frac{7\pi}{2}\right]$
48	$12^{\sin x} = 4^{\sin x} \cdot 3^{-\sqrt{3} \cos x}$	$\left[\frac{5\pi}{2}; 4\pi\right]$
49	$12^{\sin x} = 3^{\sin x} \cdot 4^{\cos x}$	$\left[2\pi; \frac{7\pi}{2}\right]$
50	$10^{\sin x} = 2^{\sin x} \cdot 5^{-\cos x}$	$\left[-\frac{5\pi}{2}; -\pi\right]$
51	$14^{\cos x} = 2^{\cos x} \cdot 7^{-\sin x}$	$\left[\frac{\pi}{2}; 2\pi\right]$
52	$15^{\cos x} = 3^{\cos x} \cdot 5^{\sin x}$	$\left[5\pi; \frac{13\pi}{2}\right]$

$$53 \quad 20^{\cos x} = 4^{\cos x} \cdot 5^{-\sin x}$$

$$\left[-\frac{9\pi}{2}; -3\pi \right]$$

$$54 \quad 21^{-\sin x} = 3^{-\sin x} \cdot 7^{\cos x}$$

$$\left[-\frac{3\pi}{2}; 0 \right]$$

$$55 \quad (36^{\cos x})^{\sin x} = \left(\frac{1}{6} \right)^{\sqrt{2} \sin x}$$

$$\left[-\pi; \frac{\pi}{2} \right]$$

$$56 \quad (25^{\sin x})^{\cos x} = 5^{\sqrt{3} \sin x}$$

$$\left[\frac{5\pi}{2}; 4\pi \right]$$

$$57 \quad (25^{\sin x})^{-\cos x} = 5^{\sqrt{2} \sin x}$$

$$\left[\frac{3\pi}{2}; 3\pi \right]$$

$$58 \quad (64^{\cos x})^{\sin x} = 8^{\sqrt{3} \cos x}$$

$$\left[\pi; \frac{5\pi}{2} \right]$$

$$59 \quad (49^{\cos x})^{\sin x} = 7^{\sqrt{2} \cos x}$$

$$\left[\frac{5\pi}{2}; 4\pi \right]$$

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$$\left(16^{\sin x}\right)^{\cos x} = \left(\frac{1}{4}\right)^{\sqrt{3} \sin x}$$

$$\left[2\pi; \frac{7\pi}{2}\right]$$

61

$$\left(81^{\sin x}\right)^{\cos x} = \left(\frac{1}{9}\right)^{\sqrt{2} \cos x}$$

$$\left[-3\pi; -\frac{3\pi}{2}\right]$$

62

$$\left(81^{\cos x}\right)^{\sin x} = 9^{-\sqrt{3} \cos x}$$

$$\left[-2\pi; -\frac{\pi}{2}\right]$$