Disequazioni goniometriche fratte

1	$\dfrac{\sin x}{1 - 2\sin x} > 0$	$2\kappa\pi < x < \dfrac{\pi}{6} + 2\kappa\pi \quad \vee$ $\dfrac{5}{6}\pi + 2\kappa\pi < x < \pi + \kappa\pi$
2	$\dfrac{\frac{\sin x}{\cos x} + \sqrt{3}}{2\cos^2 x - 1} \leq 0$	$\dfrac{\pi}{4} + \kappa\pi < x < \dfrac{\pi}{2} + \kappa\pi \ \vee$ $\dfrac{2}{3}\pi + \kappa\pi < x < \dfrac{3}{4}\pi + 2\kappa\pi$
3	$\dfrac{2\sin^2 x + 1}{\cos 2x} < 0$	$\dfrac{\pi}{4}\kappa\pi < x < \dfrac{3}{4}\pi + \kappa\pi$
4	$1 - \dfrac{1}{\tan x} > 0$	$\dfrac{\pi}{4} + \kappa\pi < x < \dfrac{\pi}{2} + \kappa\pi \ \vee$ $\dfrac{\pi}{2} + \kappa\pi < x < \pi + \kappa\pi$
5	$\dfrac{\sin x}{\sin x + 1} > 1$	*impossibile*
6	$\dfrac{1 - \cos x}{\sin x \cos x} \geq 0$	$\kappa\pi < x < \dfrac{\pi}{2} + \kappa\pi$
7	$\dfrac{1}{\cot x} + \dfrac{1}{\tan x} < \dfrac{4}{3}$	$\dfrac{\pi}{2} + \kappa\pi < x < \pi + \kappa\pi$
8	$\dfrac{2\sin x + 1}{\cos x} \geq 0$	$\dfrac{\pi}{6} + 2\kappa\pi \leq x < \dfrac{\pi}{2} + 2\kappa\pi \quad \vee$ $\dfrac{7}{6}\pi + 2\kappa\pi \leq x < \dfrac{3}{2}\pi + 2\kappa\pi$
9	$\dfrac{\tan x - 1}{\tan x} < 0$	$\kappa\pi < x < \pi + 2\kappa\pi$
10	$\dfrac{\sin x}{\cos x + 1} \geq 0$	$2\kappa\pi < x < \pi + 2\kappa\pi$
11	$\dfrac{1 - 2\cos x}{\tan x} \leq 0$	$2\kappa\pi < x \leq \dfrac{\pi}{3} + 2\kappa\pi \ \vee$ $\dfrac{\pi}{2} + 2\kappa\pi < x < \pi + 2\kappa\pi$ $\vee \ \dfrac{3}{2}\pi + 2\kappa\pi < x \leq \dfrac{5}{3}\pi + 2\kappa\pi$
12	$\dfrac{2\sin x - \sqrt{3}}{2\cos x + 1} > 0$	$\dfrac{\pi}{3} + 2\kappa\pi \leq x\dfrac{4}{3}\pi + 2\kappa\pi \ \vee$ $x \neq \dfrac{2}{3}\pi + 2\kappa\pi$
13	$\dfrac{\cos^2 x - \sin^2 x}{\cos x \cos 3x} < 0$	$\dfrac{\pi}{2} + 2\kappa\pi < x < \dfrac{3}{2}\pi + 2\kappa\pi \quad \vee$ $x \neq \dfrac{3}{4}\pi + 2\kappa\pi \ \vee \ x \neq \dfrac{5}{4}\pi + 2\kappa\pi$
14	$\dfrac{\sin 6x - \sin 2x}{(\cos 2x + \sin 2x)(\cos 2x - \sin 2x)} \geq 0$	$\kappa\pi \leq x \leq \dfrac{\pi}{2} + \kappa\pi \ \vee \ x \neq \dfrac{\pi}{8} + \kappa\dfrac{\pi}{4}$
15	$\dfrac{2\sin x \cos^2 x}{\cos 3x + \cos x} \geq 0$	$\kappa\dfrac{\pi}{2} \leq x < \dfrac{\pi}{4} + \kappa\dfrac{\pi}{2} \ \vee \ x \neq \dfrac{\pi}{2} + \kappa\pi$

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16	$\dfrac{2\sin x + \sqrt{2}}{\tan x - \sqrt{3}} \le 0$	$-\dfrac{\pi}{4} + 2\kappa\pi \le x < \dfrac{\pi}{3} + 2\kappa\pi \quad \vee$ $\dfrac{\pi}{2} + 2\kappa\pi < x \le \dfrac{5}{4}\pi + 2\kappa\pi \quad \vee$ $\dfrac{4}{3}\pi + 2\kappa\pi < x < \dfrac{3}{2}\pi + 2\kappa\pi$
17	$\dfrac{2\cos x - 3}{\sin x} \ge 0$	$\pi + 2\kappa\pi < x < 2\pi + 2\kappa\pi$
18	$\dfrac{1 + \sin^2\left(x + \dfrac{\pi}{3}\right)}{1 - \cot^2\left(\dfrac{\pi}{6} - x\right)} > 0$	$-\dfrac{7}{12}\pi + \kappa\pi < x < -\dfrac{\pi}{12} + \kappa\pi$
19	$\dfrac{4\sin^2 x - 1}{2\cos x} \ge 0$	$\dfrac{\pi}{6} + 2\kappa\pi < x < \dfrac{\pi}{2} + 2\kappa\pi$ $\vee \ \dfrac{5}{6}\pi + 2\kappa\pi \le x < \dfrac{7}{6}\pi + 2\kappa\pi$ $\dfrac{3}{2}\pi + 2\kappa\pi < x \le \dfrac{11}{6}\pi + 2\kappa\pi$
20	$\dfrac{4\cos^2 x - 3}{2\sin x - 1} > 0$	$\dfrac{7}{6}\pi + 2\kappa\pi < x < \dfrac{11}{6}\pi + 2\kappa\pi$
21	$\dfrac{2\sin x - 1}{\sin x} > 0$	$2\kappa\pi < x < \dfrac{\pi}{2} + 2\kappa\pi \ \vee$ $\dfrac{\pi}{2} + 2\kappa\pi < x < \pi + 2\kappa\pi$
22	$\dfrac{\sin x + \sqrt{3}}{\sin x} \ge 3$	$2\kappa\pi < x \le \dfrac{\pi}{3} + 2\kappa\pi \ \vee$ $\dfrac{2}{3}\pi + 2\kappa\pi \le x < \pi + 2\kappa\pi$
23	$\dfrac{\sqrt{3}\tan x - 1}{2\sin x - \sqrt{3}} < 0$	$\dfrac{\pi}{6} + 2\kappa\pi < x < \dfrac{\pi}{3} + 2\kappa\pi$ $\dfrac{\pi}{2} + 2\kappa\pi < x < \dfrac{2}{3}\pi + 2\kappa\pi$ $\dfrac{7}{6}\pi + 2\kappa\pi < x < \dfrac{3}{2}\pi + 2\kappa\pi$
24	$\dfrac{\sin 2x}{\sin x\,(2\sin x - \sqrt{2})} \le 0$	$0 < x < \dfrac{\pi}{4} \ \vee \ \dfrac{\pi}{2} \le x < \dfrac{3}{4}\pi \ \vee$ $\dfrac{3}{2}\pi \le x < 2\kappa\pi$