Формулы для решения уравнений.

1. $\sin x = 0$ $\quad x = \pi n,\ n \in Z$
2. $\sin x = 1$ $\quad x = \frac{\pi}{2} + 2\pi n,$
3. $\sin x = -1$ $\quad x = -\frac{\pi}{2} + 2\pi n,\ n \in Z$
4. $\sin x = \alpha$ $\quad x = (-1)^n \arcsin \alpha + \pi n,\ n \in Z$
5. $\cos x = 0$ $\quad x = \frac{\pi}{2} + \pi n,\ n \in Z$
6. $\cos x = 1$ $\quad x = 2\pi n,\ n \in Z$
7. $\cos x = -1$ $\quad x = \pi + 2\pi n,\ n \in Z$
8. $\cos x = \alpha$ $\quad x = \pm \arccos \alpha + 2\pi n,\ n \in Z$
9. $\operatorname{tg} x = \alpha$ $\quad x = \operatorname{arctg} \alpha + \pi n,\ n \in Z$
10. $\operatorname{ctg} x = \alpha$ $\quad x = \operatorname{arctg} \frac{1}{\alpha} + \pi n,\ n \in Z$

Решить тригонометрические уравнения:

1. $2\cos x = 1$
2. $\operatorname{ctg} 4x = \sqrt{3}$
3. $(2 \sin x + 1)(\cos 3x - 1) = 0$
4. $(6 \operatorname{tg} 2x + 1)(2 \sin x - \sqrt{2}) = 0$
5. $\operatorname{ctg} 3x\,(2\cos 5x + \sqrt{3}) = 0$