

### Goniometrie – cvičení 6:

$$1) \quad 2\sin^2 x = 1 - \sin x \quad \left\{ \frac{\pi}{6} + k \cdot \frac{2\pi}{3}; k \in \mathbb{Z} \right\}$$

$$2) \quad 4\sin\left(2x - \frac{\pi}{6}\right) = -2 \quad \left\{ \frac{2\pi}{3} + k\pi; k\pi; k \in \mathbb{Z} \right\}$$

$$3) \quad \cot g\left(\frac{\pi}{6} - 2x\right) = \frac{\sqrt{3}}{3} \quad \left\{ \frac{5\pi}{12} + k \cdot \frac{\pi}{2}; k \in \mathbb{Z} \right\}$$

$$4) \quad \cot g^2 x = \sqrt{3} \cot g x \quad \left\{ \frac{\pi}{2} + k\pi; \frac{\pi}{6} + k\pi; k \in \mathbb{Z} \right\}$$

$$5) \quad \frac{1}{\operatorname{tg} x} - 3\operatorname{tg} x = 0 \quad \left\{ \frac{\pi}{6} + k\pi; \frac{5\pi}{6} + k\pi; k \in \mathbb{Z} \right\}$$

$$6) \quad 2\sin(2x + \pi) + \sqrt{3} = 0 \quad \left\{ \frac{\pi}{6} + k\pi; \frac{\pi}{3} + k\pi; k \in \mathbb{Z} \right\}$$

$$7) \quad \frac{\operatorname{tg}\left(-x + \frac{\pi}{6}\right)}{\sqrt{3}} = 1 \quad \left\{ \frac{5\pi}{6} + k\pi; k \in \mathbb{Z} \right\}$$

$$8) \quad \sin^2 3x - \sin 3x = 0 \quad \left\{ \frac{k\pi}{3}; \frac{\pi}{6} + \frac{2k\pi}{3}; k \in \mathbb{Z} \right\}$$