## Занятие №8

1. 
$$7^x + 2 \cdot 7^{1-x} - 9 = 0$$

**2.** 
$$\frac{3^{x+1}+5}{3^x-1} - \frac{3^{x+1}-5}{3^x+1} = 6$$

**3.** 
$$\sin \frac{x}{2} = -\frac{\sqrt{2}}{2}$$

**4.** 
$$\cos\left(x + \frac{\pi}{6}\right) = -\frac{\sqrt{3}}{2}$$

**5.** 
$$\sin^2 x = \frac{1}{5}$$

**6.** 
$$\sin^2 x + 2\cos x - 2 = 0$$

7. 
$$\cos 2x + \cos x = 0$$

**8.** 
$$2\sin^2 x = 3\cos x$$

$$9. \sin 3x \cos x + \sin x \cos 3x = 0$$

**10.** 
$$\sin x \cos \frac{\pi}{3} + \sin \frac{\pi}{3} \cos x = 0$$

**11.** 
$$2\cos 2x - 5 = 8\sin x$$

**12.** 
$$\frac{\sqrt{3}}{2}\sin x - \frac{1}{2}\cos x = \frac{\sqrt{3}}{2}$$