# 1.5 Trigonometrijske funkcije

1. Izračunati vrednost ostalih trigonometrijskih fnkcija ako je:

$$(a) \quad \cos \alpha = \frac{12}{13}, \quad 0 < \alpha < \frac{\pi}{2},$$

$$(b) \quad \sin \alpha = \frac{3}{5}, \quad \frac{\pi}{2} < \alpha < \pi,$$

$$(c) \quad \sin \alpha = -\frac{2}{\sqrt{13}}, \quad \pi < \alpha < \frac{3\pi}{2}.$$

2. Izračunati $\sin(\alpha - \beta)$ ako je $\sin \alpha = \frac{\sqrt{2}}{2}$, $\cos \beta = \frac{3}{5}$, $0 < \alpha, \beta < \frac{\pi}{2}$.

3. Izračunati $\cos(\alpha + \beta)$ ako je $\cos \alpha = -\frac{\sqrt{2}}{2}$, $\sin \beta = \frac{3}{5}$, $\frac{\pi}{2} < \alpha < \pi$, $0 < \beta < \frac{\pi}{2}$ .

4. Izračunati $\sin 2\alpha$ ako je $\sin \alpha = -\frac{4}{5}$, $\pi < \alpha < \frac{3\pi}{2}$.

5. Izračunati $\cot 2\alpha$ ako je $\cos \alpha = \frac{12}{13}$, $\frac{3\pi}{2} < \alpha < 2\pi$.

**Rešenja**

1. (a) $\sin \alpha = \frac{5}{13}$, $\tan \alpha = \frac{5}{12}$, $\cot \alpha = \frac{12}{5}$,
   (b) $\cos \alpha = -\frac{4}{5}$, $\tan \alpha = -\frac{3}{4}$, $\cot \alpha = -\frac{4}{3}$,
   (c) $\cos \alpha = -\frac{3}{\sqrt{13}}$, $\tan \alpha = \frac{2}{3}$, $\cot \alpha = \frac{3}{2}$

2. $\sin(\alpha - \beta) = -\frac{\sqrt{2}}{10}$     $(\cos \alpha = \frac{\sqrt{2}}{2}, \sin \beta = \frac{4}{5})$

3. $\cos(\alpha + \beta) = -\frac{7\sqrt{2}}{10}$     $(\sin \alpha = \frac{\sqrt{2}}{2}, \cos \beta = \frac{4}{5})$

4. $\sin 2\alpha = -\frac{7}{25}$     $(\cos \alpha = -\frac{3}{5})$

5. $\cot 2\alpha = -\frac{119}{120}$     $(\sin \alpha = -\frac{5}{13}, \cot \alpha = -\frac{12}{5})$