

**Aufgabe 1**

(a)  $\cos \varphi$

(b)  $\tan \varphi$

(c)  $\sin \varphi$

**Aufgabe 2**

$$\cos \varphi = \frac{\sqrt{13}}{5}$$

**Aufgabe 3**

$$\cos \varphi = \frac{3}{5}, \sin \varphi = \frac{4}{5}$$

**Aufgabe 4**

(a)  $\cos(180^\circ) = -1$

(b)  $\sin(0^\circ) = 0$

(c)  $\tan(90^\circ) = -$

**Aufgabe 5**

(a)  $\cos(88^\circ) > 0$

(b)  $\sin(133^\circ) > 0$

(c)  $\tan(241^\circ) > 0$

**Aufgabe 6**

(a) I. Quadrant

(b) IV. Quadrant

(c) II. Quadrant

**Aufgabe 7**

(a)  $-\sin 122^\circ$

(b)  $-\tan 222^\circ$

(c)  $\cos 43^\circ$

**Aufgabe 8**

(a)  $-\cot(12^\circ)$

(b)  $-\cos(11^\circ)$

(c)  $-\cos(41^\circ)$

**Aufgabe 9**

$$\varphi_1 = 35.2^\circ; \varphi_2 = 144.8^\circ$$

**Aufgabe 10**

$$\varphi_1 = 125.0^\circ; \varphi_2 = 235^\circ$$

**Aufgabe 11**

$$\varphi_1 = 308.3^\circ; \varphi_2 = 128.3^\circ$$