

Zadatak 13. Odredi argumente kompleksnih brojeva:

1) $z = -1 + i$;

2) $z = -1 - i\sqrt{3}$;

3) $z = \sqrt{3} - i$;

4) $z = -\frac{1}{2} + 3i$.

Rješenje.

1) $z = -1 + i \Rightarrow$ II. kvadrant, $\operatorname{tg} \varphi = \frac{1}{-1} = -1 \Rightarrow \varphi = \frac{3\pi}{4}$;

2) $z = -1 - i\sqrt{3} \Rightarrow$ III. kvadrant, $\operatorname{tg} \varphi = \frac{-\sqrt{3}}{-1} = \sqrt{3} \Rightarrow \varphi = \frac{4\pi}{3}$;

3) $z = \sqrt{3} - i \Rightarrow$ IV. kvadrant, $\operatorname{tg} \varphi = \frac{-1}{\sqrt{3}} = -\frac{\sqrt{3}}{3} \Rightarrow \varphi = \frac{11\pi}{6}$;

4) $z = -\frac{1}{2} + 3i \Rightarrow$ II. kvadrant, $\operatorname{tg} \varphi = \frac{3}{-\frac{1}{2}} = -6 \Rightarrow \varphi = 99^\circ 27' 44''$.