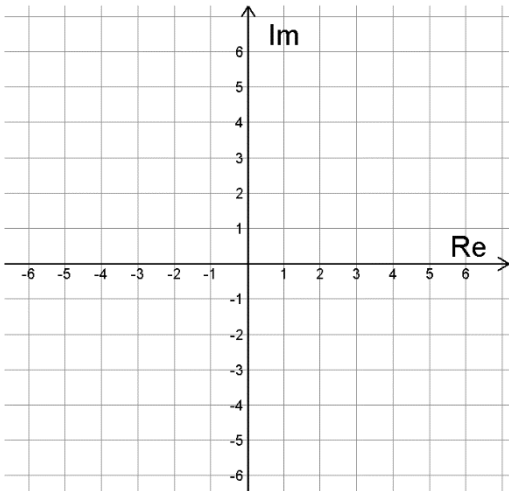


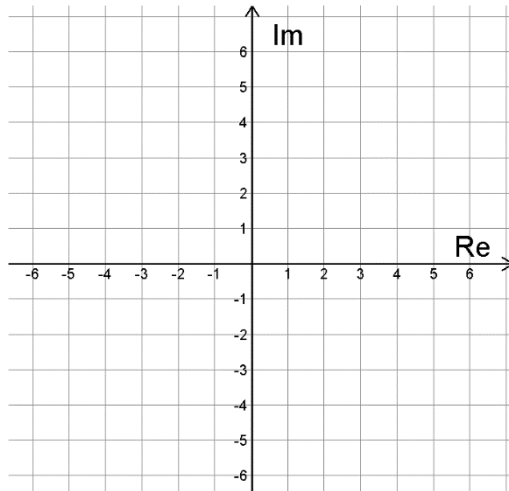
1.5 Områden i det komplexa talplanet

Del 1 – Utan digitala verktyg

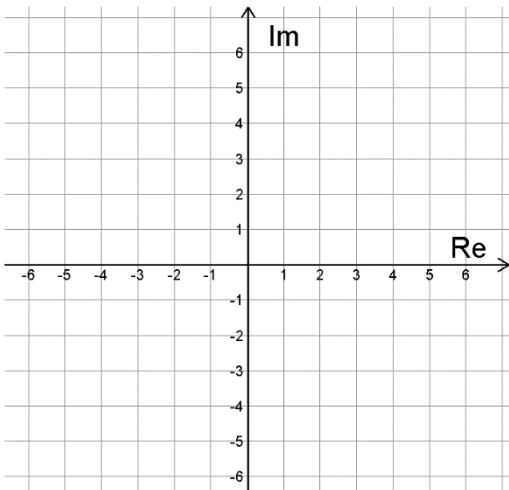
1. Markera i de komplexa talplanen nedan alla de tal, z , som beskrivs av sambanden nedanför.



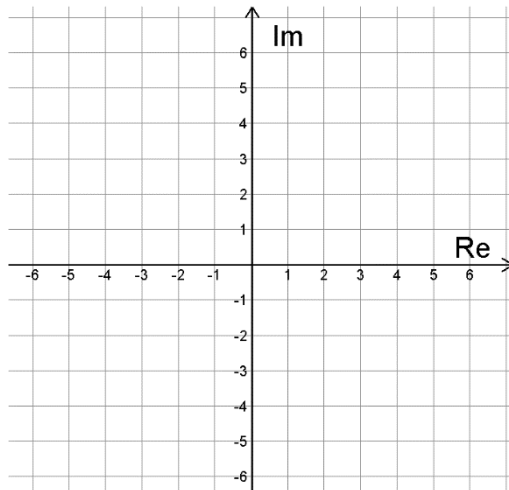
a) $\text{Im } z = -\text{Re } z$ (1/0/0)



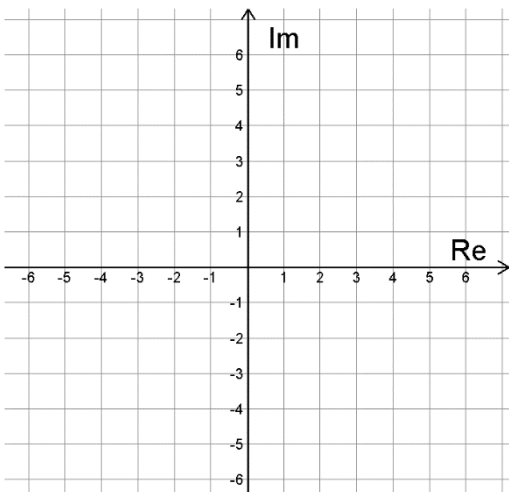
b) $\text{Im } z \leq -4 + \text{Re } z$ (2/0/0)



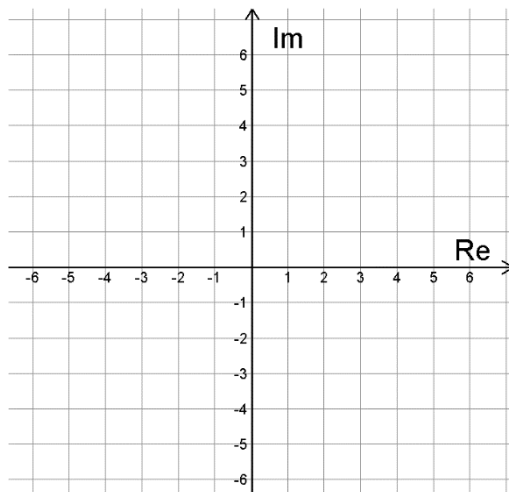
c) $\text{Re } z > 2$ (1/0/0)



d) $|z| > 4$ (2/0/0)

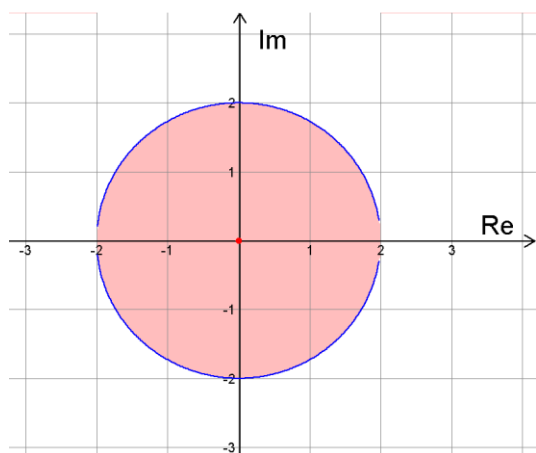


e) $\pi < \arg z < \frac{3\pi}{2}$ (1/0/0)



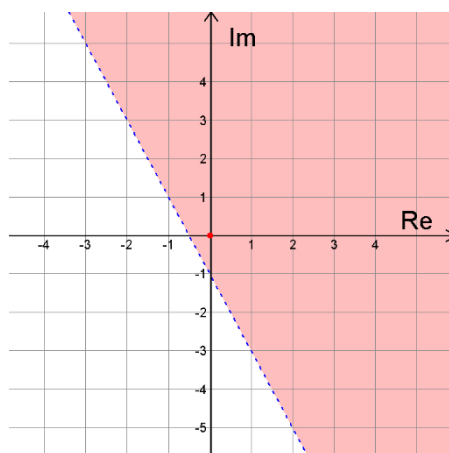
f) $\frac{\pi}{4} < \arg z \leq \frac{\pi}{2}$ (1/1/0)
 $\text{Im } z > 4$ samtidigt

2. I de komplexa talplanen nedan visas de tal, z (= de färgade talen), som tillsammans utgör ett område. Uttryck områdena med en ekvation/olikhet.



a)

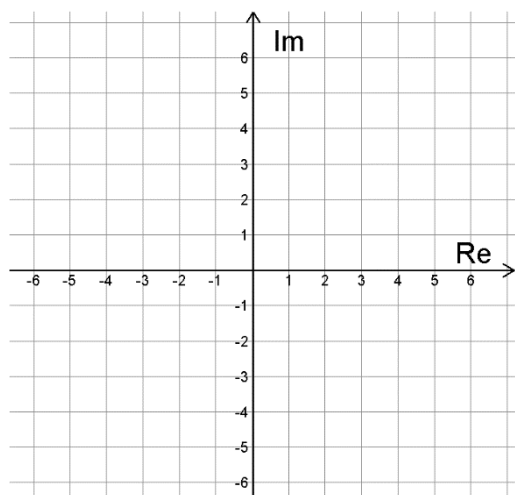
$(2/0/0)$



b)

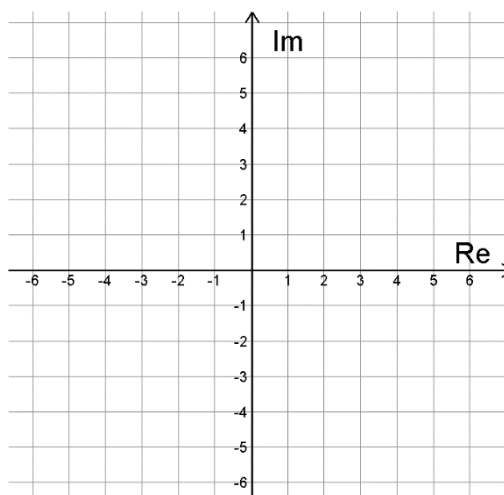
$(0/1/0)$

3. Markera i de komplexa talplanen nedan alla de tal som beskrivs av sambanden nedanför.



a) $|z - 2| < 5$

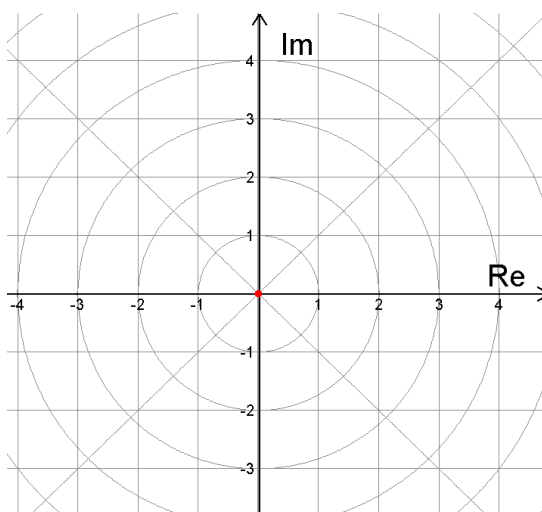
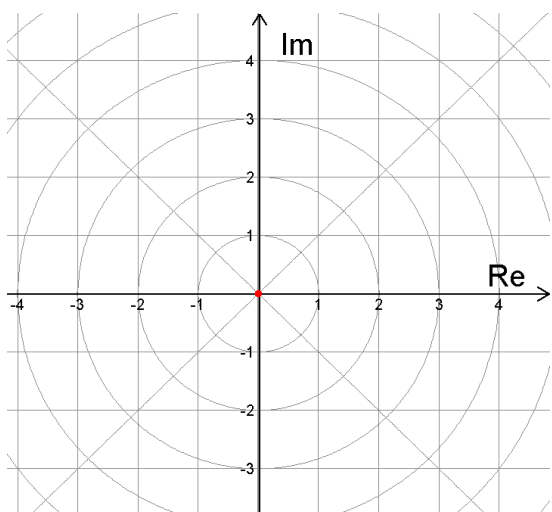
$(1/1/0)$



b) $|z + 3i| \geq 3$

$(1/1/0)$

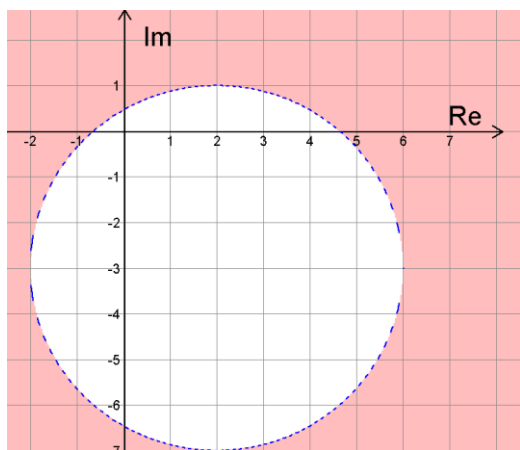
4. Markera i det komplexa talplanen nedan alla de tal, z , som samtidigt uppfyller **båda** villkoren nedanför



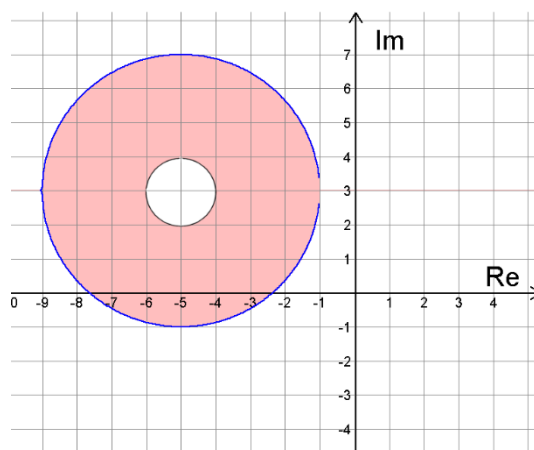
a) $1 < |z| \leq 3$
 $\frac{\pi}{2} \leq \arg(z) \leq \frac{5\pi}{4}$ (1/1/0)

b) $2 < |z| \leq 4$
 $\arg(z) = \arg(\bar{z})$ (1/1/0)

5. I de komplexa talplanen nedan visas de tal, z (= de färgade talen), som tillsammans utgör ett område. Uttryck områdena med en ekvation/olikhet.

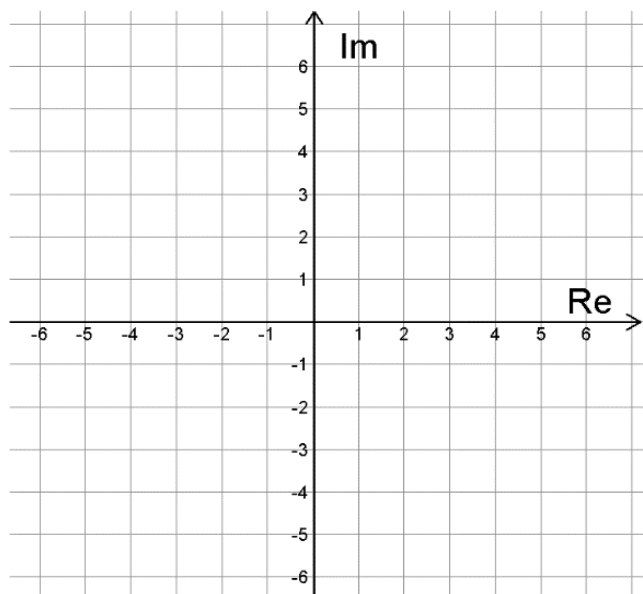


a) (0/2/0)

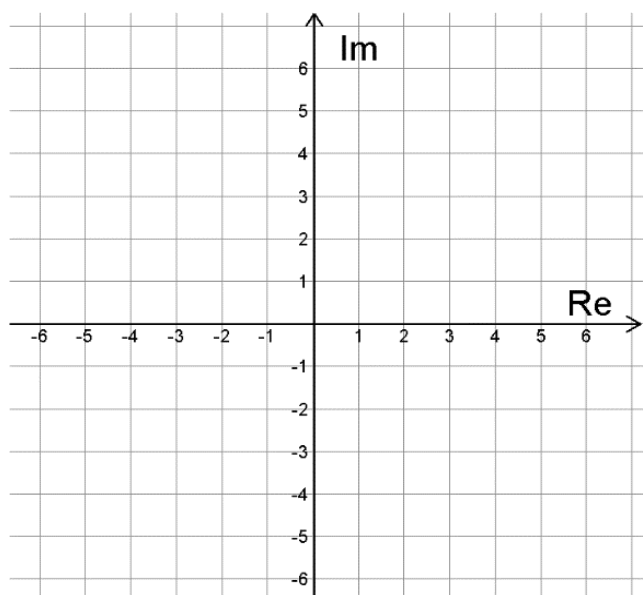


b) (0/2/0)

6. Markera i de komplexa talplanen nedan de tal, z , som uppfyller



a) $|z - \bar{z}| = \operatorname{Re} z$ (0/0/2)



b) $|z - 2 + 2i| = |z + 4i|$ (0/0/2)