

1. $\mu \quad z=x+yi, x,y \in \mathbb{R}. \quad \mathbb{N} \quad |z| \quad (\quad 5)$
- A2. $\mu \quad z_1, z_2 \quad |z_1 \cdot z_2| = |z_1| |z_2| \quad (\quad 5)$
- A3. $\mu \quad \mu \mu$

1. $A \quad z \in \mathbb{C} \quad z^0 = 1$
2. $\mu, w \quad \bar{z} = w \quad \bar{w} = z$
3. $z \quad \mu \quad : \quad -z \quad \mu \mu \quad z$
4. $A \quad z = r + s i \quad r = \operatorname{Re}(z) = \frac{z + \bar{z}}{2} \quad s = \operatorname{Im}(z) = \frac{z - \bar{z}}{2}$
5. $f: A \rightarrow \mathbb{R} \quad g: B \rightarrow \mathbb{R}. \quad f(A) \cap B \neq \emptyset \quad \text{gof} \quad (\quad 5.2=10)$

$$\mu \quad z \quad w \quad (3-4i)z + (3+4i)\bar{z} - 20 = 0 \quad w \cdot \bar{w} = 1,$$

1. $\mu \quad \mu \quad z \quad (\quad 5)$
2. $\mu \quad \mu \quad w \quad (\quad 5)$
3. $\mu \quad |z| \quad (\quad 5)$
4. $\mu \quad |z-w| \quad (\quad 10)$

- $\mu \quad z \quad \frac{z^3}{20+15i} + \frac{20-15i}{\bar{z}} = 0 \quad \operatorname{Im}(z) > 0 \quad :$
1. $\bar{z} = \frac{25}{z} \quad (\quad 10)$

2.N μ z (7)

3.N μ $v \in \mathbb{N}$ $\left(\frac{z}{5}\right)^v + \left(\frac{5}{z}\right)^v + 2 = 0$ (8)

μ μ : $z = \frac{8-6i}{1-2i} + i^{50} - i^{95} + i^{65}$
 $f(x) = \sqrt{|x - \text{Im}(z)| - \text{Re}(z)} + \ln(e^{x+|z|} - 1)$.

1. z μ $+ i$ (8)

2. μ f (7)

3. $h(x) = f(x) - \sqrt{|x-4|-3}$ \log, μ $g(x) = \sqrt{x} \cdot$ (10)