

Send the task to: kmwr@o2.pl. The safest format is .pdf

Total time for the test: 13 minutes

1. Solve, exactly, for $z \in \mathbf{C}$,

(a) $3z^2 - 2z + 5 = 0$,

(b) $3\text{Im}(2i - z) = 5 - i + i\text{Re}((1 + i)z)$.

(7p)

2. Let $w = \frac{1 - 2i}{\bar{z} + i}$. Draw all $z \in \mathbf{C}$ for which w is purely imaginary.

(6p)