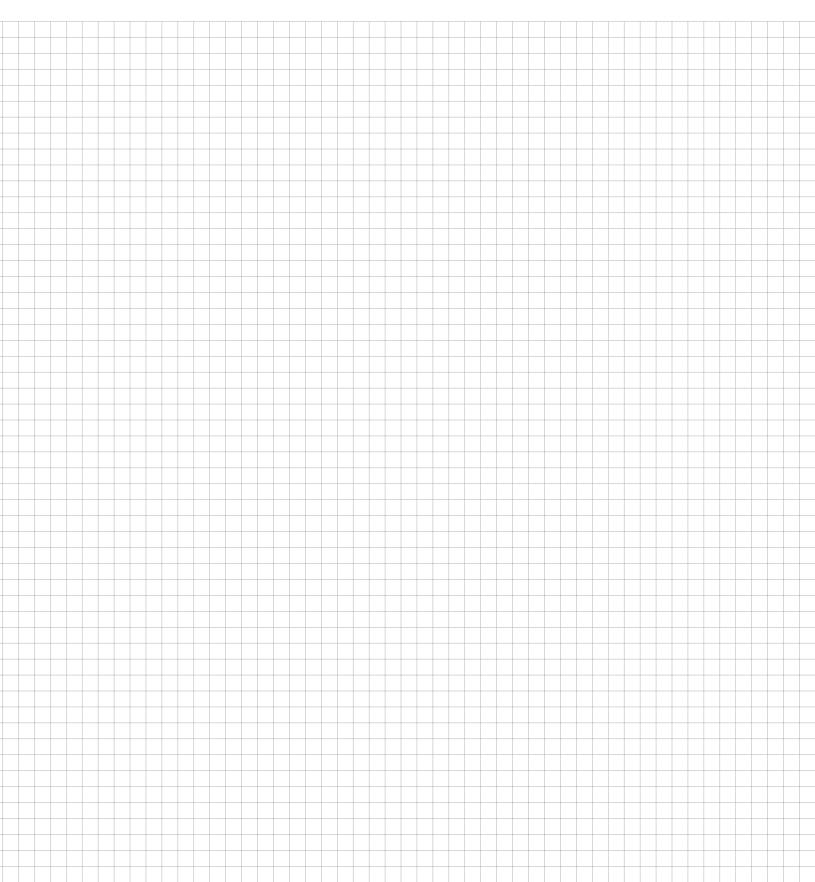
| IMIĘ i NAZWISKO (DRUKOWANE): | |
|----------------------------------|---------|
| Nr grupy: | 40 pkt. |
| Kolokwium II – 12 czorweg 2025 r | |

1. Oblicz pole obszaru ograniczonego krzywymi

 $y = 32\sqrt{x}, \qquad y = x^3, \qquad y = 32x^3.$

10 pkt.



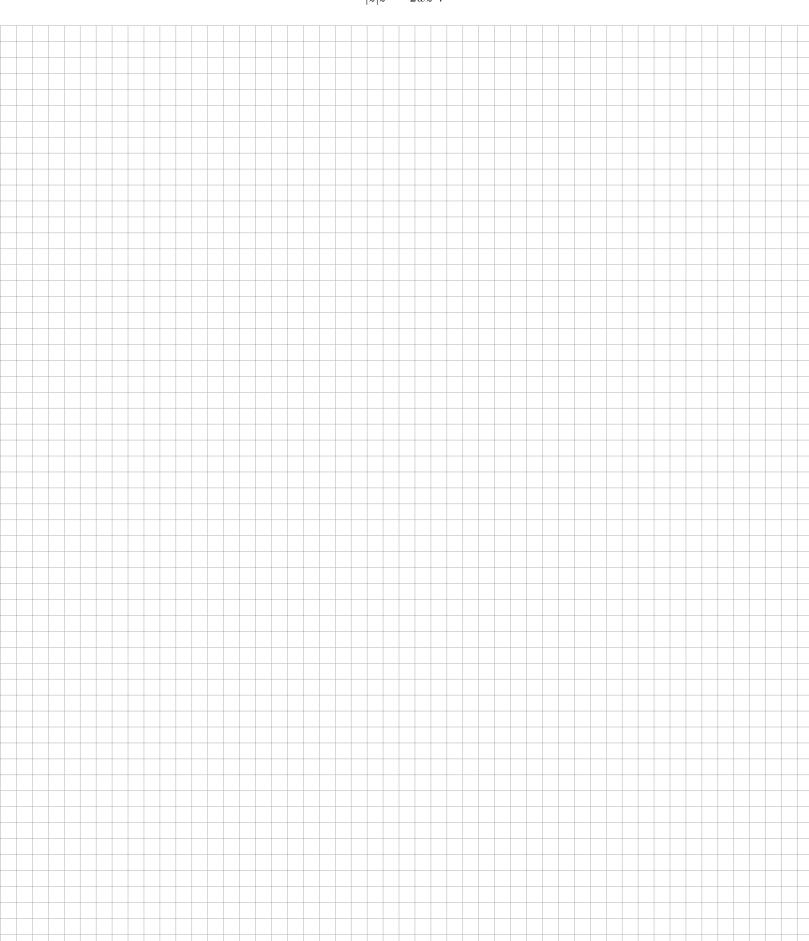
2. Przedstaw w postaci algebraicznej liczbę

$$w = \left(\frac{-1 - i}{\sqrt{2}}\right)^{166},$$

10 pkt.

a następnie rozwiąż równanie

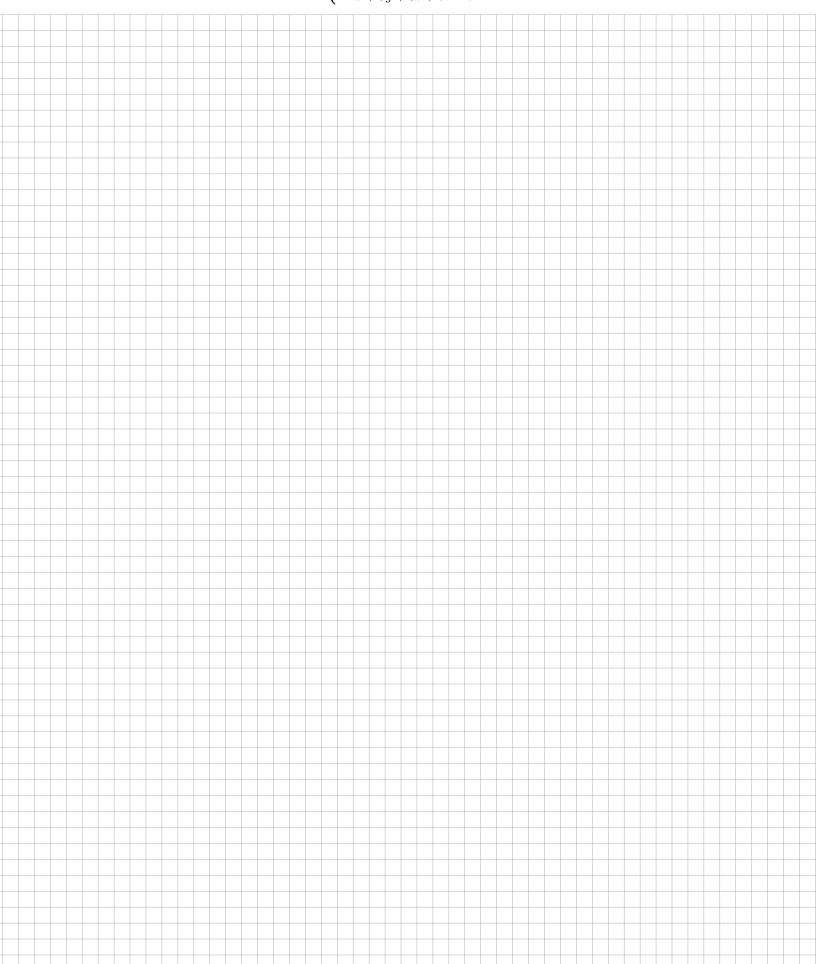
$$|z|z^3 = 2w\bar{z}^3.$$



3. Rozwiąż układ równań

 $\begin{cases}
4x - 3y + 2z - 6t = -9 \\
x + y - z - 3t = 6 \\
-2x + 5y + 3z + 7t = 7
\end{cases}$

10 pkt.



| 4. | Oblicz | w | zależności | od | wartości | parametru | $a \in$ | = TR | rzad | macierzy |
|----|---------|----|------------|----|-----------|-----------|---------|------|------|----------|
| ъ. | ODIICZ, | vv | Zaicznosci | ou | wai iosci | parametra | $u \ $ | _ ши | LZau | macicizy |

$$\begin{bmatrix} 2 & a+1 & -a-4 & 4 \\ 3 & 3a & a^2-7 & a+10 \\ 1 & 2a-1 & a-2 & 5 \end{bmatrix}.$$

10 pkt.

| | | | | | | | | | _ | | | | | | | | | | | | | | | | | | |
|--|--|--|---|---|--|--|--|--|---|--|---|---|--|--|--|----|--|--|---|--|---|--|--|--|--|----|--|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | _ | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | - | | | | | | | | | _ | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | + | | | | | | | | | | | | | | | | | | _ | | | | | | |
| | | | + | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | _ | | | | | | | | | | | | | | | |
| | | | _ | | | | | | | | | | | | | - | | | | | | | | | | | |
| | | | _ | | | | | | | | | | | | | ++ | | | | | | | | | | | |
| | | | - | + | | | | | | | + | | | | | | | | | | | | | | | +- | |
| | | | + | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | + | | | | | | | | | | | | | | | | | | + | | | | | | |
| | | | + | | | | | | | | | | | | | + | | | | | + | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | _ | | | | | | | | | _ | | | | | | | | | _ | | | | | | |
| | | | + | | | | | | | | - | | | | | + | | | | | - | | | | | + | |
| | | | - | + | | | | | | | + | | | | | | | | | | | | | | | +- | |
| | | | - | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | _ | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | - | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | + | | | | | | | | | | | | | ++ | | | | | | | | | | | |
| | | | + | | | | | | | | | | | | | ++ | | | + | | | | | | | | |
| | | | + | | | | | | | | | | | | | | | | | | + | | | | | | |
| | | | + | | | | | | | | | | | | | + | | | | | + | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |