



**2024**

**2024 Joint Admission Examination for Macao Four Higher  
Education Institutions (Languages and Mathematics)**

**Syllabus**

**Mathematics Supplementary Paper**

1. \_\_\_\_\_

2. \_\_\_\_\_ 位

3. \_\_\_\_\_

$n \times n$

$n \leq 3$

4. \_\_\_\_\_ 位

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_  
式  $n$

--

---

$$f^{-1}(x) \qquad f(x)$$
$$\overline{AB} \qquad A \qquad B$$

$$|\overrightarrow{AB}| \qquad \overline{AB}$$

$$\overrightarrow{AB} \cdot \overrightarrow{CD} \qquad \overline{AB} \qquad \overrightarrow{CD}$$

$$|A| \qquad A$$

$$\frac{dy}{dx} \quad \frac{d^2y}{dx^2} \qquad y$$

$$f'(x) \quad f''(x) \qquad f(x)$$

$$\int f(x) dx \qquad f(x)$$

$$\int_a^b f(x) dx \qquad f(x) \qquad a, b$$

$$\operatorname{Re}(z), \operatorname{Im}(z), |z| \qquad z$$

$$\arg(z), \bar{z}$$



## **Appendix – Mathematical Symbols**

In addition to those notations used in the Mathematics Standard Paper, the Mathematics Supplementary Paper adopts the following notations:

$f^{-1}(x)$	Inverse function of the function $f(x)$ .
$\overrightarrow{AB}$	Vector from point $A$ to point $B$ .
$ \overrightarrow{AB} $	Magnitude (length) of $\overrightarrow{AB}$ .
$\overrightarrow{AB} \cdot \overrightarrow{CD}$	Scalar product of $\overrightarrow{AB}$ and $\overrightarrow{CD}$ .
$ A $	Determinant of the square matrix $A$ .
$\frac{dy}{dx}, \frac{d^2y}{dx^2}$	First and second derivatives of $y$ .
$f'(x), f''(x)$	First and second derivatives of $f(x)$ .
$\int f(x) dx$	Indefinite integral of $f(x)$ .
$\int_a^b f(x) dx$	Definite integral of $f(x)$ over interval $[a, b]$ .
$\operatorname{Re}(z), \operatorname{Im}(z),  z , \arg(z), \bar{z}$	The real part, imaginary part, modulus, argument, and conjugate of the complex number $z$ .