

①

$$C \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}, \frac{z_1 + z_2}{2} \right)$$

②

$$\begin{aligned} AB &= \sqrt{(-2-3)^2 + (1+2)^2 + (3-1)^2} = \sqrt{25+9+4} = \sqrt{38} \\ AC &= \sqrt{(1-3)^2 + (3+2)^2 + (-2-1)^2} = \sqrt{4+25+9} = \sqrt{38} \\ BC &= \sqrt{(1+2)^2 + (3-1)^2 + (-2-3)^2} = \sqrt{9+4+25} = \sqrt{38} \end{aligned}$$

∴ $AB = AC = BC \Rightarrow \triangle ABC$ - equilateral