

Exercise 41

For the following exercises, perform the indicated operation and express the result as a simplified complex number.

$$i^8$$

Solution

Use the fact that $i = \sqrt{-1}$ and $i^2 = -1$.

$$i^8$$

$$i^2 \cdot i^2 \cdot i^2 \cdot i^2$$

$$(-1) \cdot (-1) \cdot (-1) \cdot (-1)$$

$$1$$