Exercise 51

For the following exercises, evaluate the expressions, writing the result as a simplified complex number.

$$i^7(1 + i^2)$$

Solution

Simplify the given expression.

$$\begin{aligned}
i^7(1 + i^2) &= i^7[1 + (-1)] \\
&= i^7(1 - 1) \\
&= i^7(0) \\
&= 0
\end{aligned}$$