

5.

Which of the following is the remainder of $j^3 + j^2 + 2j + 1$ divided by $j - 3$

$$\begin{array}{r}
 + (\boxed{j^2}) + (\boxed{4j}) \\
 \hline
 \boxed{j-3} + (\boxed{1j^2}) + (\boxed{1}) \\
 + (\boxed{j^3}) + (\boxed{-3j^2}) \\
 + (\boxed{4j^2}) + (\boxed{1}) \\
 + (\boxed{4j^2}) + (\boxed{-12j}) \\
 + (\boxed{14j}) + (\boxed{1}) \\
 + (\boxed{14j}) + (\boxed{-42}) \\
 + (\boxed{43})
 \end{array}$$