## 5.

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

$$
\begin{array}{r}
+(\boxed{-u^2}) \quad +(\boxed{6u}) \quad +(\boxed{-21}) \\
\hline
u+3 \quad (-1)u^3 +(3)u^2 \quad +(-3)u \quad +(-2) \\
(\boxed{-u^3}) +(\boxed{-3u^2}) \\
+(6)u^2 \quad +(-3)u \quad +(-2) \\
+(\boxed{6u^2}) \quad +(\boxed{18u}) \\
+(-21)u \quad +(-2) \\
+(\boxed{-21u}) \quad +(\boxed{-63}) \\
+(\boxed{61})
\end{array}
$$