

5.

Which of the following is the quotient of  $z^3 + 3z^2 + 1$  divided by  $z - 3$

$$\begin{array}{r}
 \phantom{z-3} + (\boxed{z^2}) \phantom{+ (6z)} + (\boxed{6z}) \phantom{+ (18)} \\
 \hline
 \boxed{z-3} \phantom{+ (1)z^3} + (\boxed{3})z^2 \phantom{+ (1)} \\
 \phantom{z-3} (\boxed{z^3}) + (\boxed{-3z^2}) \\
 \phantom{z-3} + (\boxed{6})z^2 \phantom{+ (1)} \\
 \phantom{z-3} + (\boxed{6z^2}) + (\boxed{-18z}) \\
 \phantom{z-3} \phantom{+ (6z^2)} + (\boxed{18})z + (\boxed{1}) \\
 \phantom{z-3} \phantom{+ (6z^2)} + (\boxed{18z}) + (\boxed{-54}) \\
 \phantom{z-3} \phantom{+ (6z^2)} \phantom{+ (18z)} + (\boxed{55})
 \end{array}$$