

5.

Which of the following is the Quotient of  $-3j^6 - 9j^5 - 3j^4 + 7j^3 + 3j^2 + j + 1$  divided by  $(-j - 2)j^2$

$$\begin{array}{r}
 \phantom{(-j-2)j^2} + (3j^3) + (3j^2) + (-3j) + (-1) \\
 \hline
 (-j-2)j^2 \quad (-3)j^6 + (-9)j^5 + (-3)j^4 + (7)j^3 + (3)j^2 + (1)j + (1) \\
 \phantom{(-j-2)j^2} \quad (-3j^6) + (-6j^5) \\
 \phantom{(-j-2)j^2} \phantom{(-3j^6)} + (-3)j^5 + (-3)j^4 + (7)j^3 + (3)j^2 + (1)j + (1) \\
 \phantom{(-j-2)j^2} \phantom{(-3j^6)} + (-3j^5) + (-6j^4) \\
 \phantom{(-j-2)j^2} \phantom{(-3j^6)} \phantom{(-3j^5)} + (3)j^4 + (7)j^3 + (3)j^2 + (1)j + (1) \\
 \phantom{(-j-2)j^2} \phantom{(-3j^6)} \phantom{(-3j^5)} + (3j^4) + (6j^3) \\
 \phantom{(-j-2)j^2} \phantom{(-3j^6)} \phantom{(-3j^5)} \phantom{(3j^4)} + (1)j^3 + (3)j^2 + (1)j + (1) \\
 \phantom{(-j-2)j^2} \phantom{(-3j^6)} \phantom{(-3j^5)} \phantom{(3j^4)} + (j^3) + (2j^2) \\
 \phantom{(-j-2)j^2} \phantom{(-3j^6)} \phantom{(-3j^5)} \phantom{(3j^4)} \phantom{(j^3)} + (j^2) + (j) + (1)
 \end{array}$$

Coefficient list:

$\{3, 3, -3, -1\}$