

5.

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

$$\begin{array}{r}
 \phantom{(-f-1)^2(2-f)} + (3f^3) + (-3f^2) + (2) \\
 \hline
 (-f-1)^2(2-f) \quad (-3)f^6 + (3)f^5 + (9)f^4 + (-5)f^3 + (-5)f^2 + (3)f + (2) \\
 \phantom{(-f-1)^2(2-f)} + (-3f^6) \phantom{+ (3)f^5} + (9f^4) + (6f^3) \\
 \phantom{(-f-1)^2(2-f)} \phantom{+ (-3f^6)} + (3)f^5 \phantom{+ (9f^4)} + (-11)f^3 + (-5)f^2 + (3)f + (2) \\
 \phantom{(-f-1)^2(2-f)} \phantom{+ (-3f^6)} + (3f^5) \phantom{+ (9f^4)} + (-9f^3) + (-6f^2) \\
 \phantom{(-f-1)^2(2-f)} \phantom{+ (-3f^6)} \phantom{+ (3f^5)} + (-2)f^3 + (1)f^2 + (3)f + (2) \\
 \phantom{(-f-1)^2(2-f)} \phantom{+ (-3f^6)} \phantom{+ (3f^5)} + (-2f^3) \phantom{+ (1)f^2} + (6f) + (4) \\
 \phantom{(-f-1)^2(2-f)} \phantom{+ (-3f^6)} \phantom{+ (3f^5)} \phantom{+ (-2f^3)} + (f^2) + (-3f) + (-2)
 \end{array}$$

Coefficient list:

$\{3, -3, 0, 2\}$