

5.

Which of the following is the Quotient of $-3w^6 + 9w^5 - 3w^4 - 11w^3 + 9w^2 + w - 1$ divided by $(-w - 1)(1 - w)^2$

$$\begin{array}{r}
 + (3w^3) + (-6w^2) + (2) \\
 \hline
 (-w-1)(1-w)^2 \quad (-3)w^6 + (9)w^5 + (-3)w^4 + (-11)w^3 + (9)w^2 + (1)w + (-1) \\
 + (-3w^6) + (3w^5) + (3w^4) + (-3w^3) \\
 + (6)w^5 + (-6)w^4 + (-8)w^3 + (9)w^2 + (1)w + (-1) \\
 + (6w^5) + (-6w^4) + (-6w^3) + (6w^2) \\
 + (-2)w^3 + (3)w^2 + (1)w + (-1) \\
 + (-2w^3) + (2w^2) + (2w) + (-2) \\
 + (w^2) + (-w) + (1)
 \end{array}$$

Coefficient list:

$\{3, -6, 0, 2\}$