

4.

Which of the following is the Quotient of $-3r^6 + 9r^5 + 9r^4 - 47r^3 + 21r^2 + 39r - 30$ divided by $(-r - 2)(1 - r)^2$

$$\begin{array}{r}
 + (3r^3) + (-9r^2) + (14) \\
 \hline
 (-r-2)(1-r)^2 \quad (-3)r^6 + (9)r^5 + (9)r^4 + (-47)r^3 + (21)r^2 + (39)r + (-30) \\
 + (-3r^6) + (9r^4) + (-6r^3) \\
 + (9)r^5 + (-41)r^3 + (21)r^2 + (39)r + (-30) \\
 + (9r^5) + (-27r^3) + (18r^2) \\
 + (-14)r^3 + (3)r^2 + (39)r + (-30) \\
 + (-14r^3) + (42r) + (-28) \\
 + (3r^2) + (-3r) + (-2)
 \end{array}$$

Coefficient list:

$\{3, -9, 0, 14\}$