Which of the following is the Quotient of $-3y^6 - 9y^5 + 6y^4 + 34y^3 + 21y^2 - 8y - 4$ divided by $(-y - 2)^2 (-y - 1)$ $+ (-6 y^2)$ $\left| \begin{array}{cccc} \left(-y-2 \right)^2 & \left(-y-1 \right) \end{array} \right| \quad \left(-3 \right) y^6 \\ & + \left(-9 \right) y^5 \\ & + \left(6 \right) y^4 \\ & + \left(34 \right) y^3 \\ & + \left(21 \right) y^2 \\ & + \left(-8 \right) y \\ & + \left(-4 \right) y^4 \\ & + \left(-8 \right)$ $+((-15 y^5)) + ((-24 y^4)) + ((-12 y^3))$ $+ (6) y^5 + (30) y^4 + (46) y^3 + (21) y^2 + (-8) y + (-4)$

$$+ (\underbrace{(6 \ y^5)}) \qquad + (\underbrace{(30 \ y^4)}) \qquad + (\underbrace{(48 \ y^3)}) \qquad + (\underbrace{(24 \ y^2)}) \\ \qquad \qquad + (-2) \ y^3 \qquad + (-3) \ y^2 \qquad + (-8) \ y \qquad + (-4) \\ \qquad \qquad + (\underbrace{(-2 \ y^3)}) \qquad + (\underbrace{(-10 \ y^2)}) \qquad + (\underbrace{(-16 \ y)}) \qquad + (\underbrace{(-8)})$$

$$+(\boxed{7} \ y^2) +(\boxed{8} \ y) +(\boxed{4})$$

Coefficient list: $\{3, -6, 0, 2\}$