

5.

Which of the following is the Quotient of  $-3y^6 + 3y^5 + 18y^4 - 14y^3 - 23y^2 + 4y - 8$  divided by  $(-y - 2)(2 - y)^2$

$$\begin{array}{r}
 \phantom{(-y-2)(2-y)^2} + (3y^3) + (3y^2) + (2) \\
 \hline
 (-y-2)(2-y)^2 \quad (-3)y^6 + (3)y^5 + (18)y^4 + (-14)y^3 + (-23)y^2 + (4)y + (-8) \\
 \phantom{(-y-2)(2-y)^2} + (-3y^6) + (6y^5) + (12y^4) + (-24y^3) \\
 \phantom{(-y-2)(2-y)^2} + (-3)y^5 + (6)y^4 + (10)y^3 + (-23)y^2 + (4)y + (-8) \\
 \phantom{(-y-2)(2-y)^2} + (-3y^5) + (6y^4) + (12y^3) + (-24y^2) \\
 \phantom{(-y-2)(2-y)^2} + (-2)y^3 + (1)y^2 + (4)y + (-8) \\
 \phantom{(-y-2)(2-y)^2} + (-2y^3) + (4y^2) + (8y) + (-16) \\
 \phantom{(-y-2)(2-y)^2} + (-3y^2) + (-4y) + (8)
 \end{array}$$

Coefficient list:

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