

4.

Which of the following is the Quotient of  $-3b^6 - 9b^5 + 9b^4 + 43b^3 + 15b^2 - 33b - 18$  divided by  $(-b - 1)^2(2 - b)$

$$\begin{array}{r}
 \phantom{(-b-1)^2(2-b)} + (3b^3) + (9b^2) + (-10) \\
 \hline
 (-b-1)^2(2-b) \quad (-3)b^6 + (-9)b^5 + (9)b^4 + (43)b^3 + (15)b^2 + (-33)b + (-18) \\
 \phantom{(-b-1)^2(2-b)} + (-3b^6) + (9b^4) + (6b^3) \\
 \phantom{(-b-1)^2(2-b)} + (-9)b^5 + (37)b^3 + (15)b^2 + (-33)b + (-18) \\
 \phantom{(-b-1)^2(2-b)} + (-9b^5) + (27b^3) + (18b^2) \\
 \phantom{(-b-1)^2(2-b)} + (10)b^3 + (-3)b^2 + (-33)b + (-18) \\
 \phantom{(-b-1)^2(2-b)} + (10b^3) + (-30b) + (-20) \\
 \phantom{(-b-1)^2(2-b)} + (-3b^2) + (-3b) + (2)
 \end{array}$$

Coefficient list:

$\{3, 9, 0, -10\}$