

5.

Which of the following is the Quotient of $-3w^6 - 15w^5 - 21w^4 + w^3 + 19w^2 + 9w + 1$ divided by $-(-w - 2)^2 w$

$$\begin{array}{r}
 + (3w^3) + (3w^2) + (-3w) + (-1) \\
 \hline
 -(-w-2)^2 w \quad (-3)w^6 + (-15)w^5 + (-21)w^4 + (1)w^3 + (19)w^2 + (9)w + (1) \\
 + (-3w^6) + (-12w^5) + (-12w^4) \\
 + (-3)w^5 + (-9)w^4 + (1)w^3 + (19)w^2 + (9)w + (1) \\
 + (-3w^5) + (-12w^4) + (-12w^3) \\
 + (3)w^4 + (13)w^3 + (19)w^2 + (9)w + (1) \\
 + (3w^4) + (12w^3) + (12w^2) \\
 + (1)w^3 + (7)w^2 + (9)w + (1) \\
 + (w^3) + (4w^2) + (4w) \\
 + (3w^2) + (5w) + (1)
 \end{array}$$

Coefficient list:

$\{3, 3, -3, -1\}$