

4.

Which of the following is the Quotient of  $-3h^6 + 9h^5 + 6h^4 - 38h^3 + 27h^2 - 8h + 4$  divided by  $(-h - 2)h^2$

$$\begin{array}{r}
 \phantom{(-h-2)h^2} \phantom{(-3)h^6} \phantom{+(9)h^5} \phantom{+(6)h^4} + (3h^3) + (-15h^2) + (24h) + (-10) \\
 \hline
 (-h-2)h^2 \phantom{(-3)h^6} \phantom{+(9)h^5} \phantom{+(6)h^4} \phantom{+(-38)h^3} \phantom{+(27)h^2} \phantom{+(-8)h} \phantom{+(4)} \\
 \phantom{(-h-2)h^2} (-3h^6) \phantom{+(15)h^5} \phantom{+(6)h^4} \phantom{+(-38)h^3} \phantom{+(27)h^2} \phantom{+(-8)h} \phantom{+(4)} \\
 \phantom{(-h-2)h^2} \phantom{(-3)h^6} (-6h^5) \phantom{+(15)h^5} \phantom{+(6)h^4} \phantom{+(-38)h^3} \phantom{+(27)h^2} \phantom{+(-8)h} \phantom{+(4)} \\
 \phantom{(-h-2)h^2} \phantom{(-3)h^6} \phantom{(-6)h^5} (15h^5) \phantom{+(6)h^4} \phantom{+(-38)h^3} \phantom{+(27)h^2} \phantom{+(-8)h} \phantom{+(4)} \\
 \phantom{(-h-2)h^2} \phantom{(-3)h^6} \phantom{(-6)h^5} \phantom{+(15)h^5} (30h^4) \phantom{+(-38)h^3} \phantom{+(27)h^2} \phantom{+(-8)h} \phantom{+(4)} \\
 \phantom{(-h-2)h^2} \phantom{(-3)h^6} \phantom{(-6)h^5} \phantom{+(15)h^5} \phantom{+(30)h^4} (-24h^4) \phantom{+(-38)h^3} \phantom{+(27)h^2} \phantom{+(-8)h} \phantom{+(4)} \\
 \phantom{(-h-2)h^2} \phantom{(-3)h^6} \phantom{(-6)h^5} \phantom{+(15)h^5} \phantom{+(30)h^4} \phantom{+(-24)h^4} (-48h^3) \phantom{+(27)h^2} \phantom{+(-8)h} \phantom{+(4)} \\
 \phantom{(-h-2)h^2} \phantom{(-3)h^6} \phantom{(-6)h^5} \phantom{+(15)h^5} \phantom{+(30)h^4} \phantom{+(-24)h^4} \phantom{+(-48)h^3} (10h^3) \phantom{+(27)h^2} \phantom{+(-8)h} \phantom{+(4)} \\
 \phantom{(-h-2)h^2} \phantom{(-3)h^6} \phantom{(-6)h^5} \phantom{+(15)h^5} \phantom{+(30)h^4} \phantom{+(-24)h^4} \phantom{+(-48)h^3} \phantom{+(10)h^3} (20h^2) \\
 \phantom{(-h-2)h^2} \phantom{(-3)h^6} \phantom{(-6)h^5} \phantom{+(15)h^5} \phantom{+(30)h^4} \phantom{+(-24)h^4} \phantom{+(-48)h^3} \phantom{+(10)h^3} \phantom{+(20)h^2} (7h^2) \phantom{+(-8)h} \phantom{+(4)} \\
 \phantom{(-h-2)h^2} \phantom{(-3)h^6} \phantom{(-6)h^5} \phantom{+(15)h^5} \phantom{+(30)h^4} \phantom{+(-24)h^4} \phantom{+(-48)h^3} \phantom{+(10)h^3} \phantom{+(20)h^2} \phantom{+(7)h^2} (-8h) \phantom{+(4)} \\
 \phantom{(-h-2)h^2} \phantom{(-3)h^6} \phantom{(-6)h^5} \phantom{+(15)h^5} \phantom{+(30)h^4} \phantom{+(-24)h^4} \phantom{+(-48)h^3} \phantom{+(10)h^3} \phantom{+(20)h^2} \phantom{+(7)h^2} \phantom{+(-8)h} (4)
 \end{array}$$

Coefficient list:

$\{3, -15, 24, -10\}$