

3.

Which of the following is the Quotient of  $-3p^6 + 9p^5 + 6p^4 - 38p^3 + 27p^2 + 4p - 8$  divided by  $(1-p)p^2$

$$\begin{array}{r}
 \phantom{(1-p)p^2} \phantom{(-3)p^6} \phantom{+(9)p^5} \phantom{+(6)p^4} + (3p^3) \phantom{+(-38)p^3} + (-6p^2) \phantom{+(27)p^2} + (-12p) \phantom{+(4)p} + (26) \\
 \hline
 (1-p)p^2 \phantom{+(-38)p^3} \phantom{+(27)p^2} \phantom{+(4)p} \phantom{+(-8)} (-3)p^6 \phantom{+(27)p^2} \phantom{+(4)p} \phantom{+(-8)} + (9)p^5 \phantom{+(4)p} \phantom{+(-8)} + (6)p^4 \phantom{+(-8)} + (-38)p^3 \phantom{+(-8)} + (27)p^2 \phantom{+(-8)} + (4)p \phantom{+(-8)} + (-8) \\
 \phantom{(1-p)p^2} \phantom{(-3)p^6} + (-3p^6) \phantom{+(27)p^2} \phantom{+(4)p} \phantom{+(-8)} + (3p^5) \phantom{+(4)p} \phantom{+(-8)} \\
 \phantom{(1-p)p^2} \phantom{(-3)p^6} \phantom{+(3p^5)} + (6)p^5 \phantom{+(4)p} \phantom{+(-8)} + (6)p^4 \phantom{+(-8)} + (-38)p^3 \phantom{+(-8)} + (27)p^2 \phantom{+(-8)} + (4)p \phantom{+(-8)} + (-8) \\
 \phantom{(1-p)p^2} \phantom{(-3)p^6} \phantom{+(3p^5)} \phantom{+(6)p^5} + (6p^5) \phantom{+(4)p} \phantom{+(-8)} + (-6p^4) \phantom{+(-8)} \\
 \phantom{(1-p)p^2} \phantom{(-3)p^6} \phantom{+(3p^5)} \phantom{+(6)p^5} \phantom{+(-6p^4)} + (12)p^4 \phantom{+(-8)} + (-38)p^3 \phantom{+(-8)} + (27)p^2 \phantom{+(-8)} + (4)p \phantom{+(-8)} + (-8) \\
 \phantom{(1-p)p^2} \phantom{(-3)p^6} \phantom{+(3p^5)} \phantom{+(6)p^5} \phantom{+(-6p^4)} \phantom{+(12)p^4} + (12p^4) \phantom{+(-8)} + (-12p^3) \phantom{+(-8)} \\
 \phantom{(1-p)p^2} \phantom{(-3)p^6} \phantom{+(3p^5)} \phantom{+(6)p^5} \phantom{+(-6p^4)} \phantom{+(12)p^4} \phantom{+(-12p^3)} + (-26)p^3 \phantom{+(-8)} + (27)p^2 \phantom{+(-8)} + (4)p \phantom{+(-8)} + (-8) \\
 \phantom{(1-p)p^2} \phantom{(-3)p^6} \phantom{+(3p^5)} \phantom{+(6)p^5} \phantom{+(-6p^4)} \phantom{+(12)p^4} \phantom{+(-12p^3)} \phantom{+(-26)p^3} + (-26p^3) \phantom{+(-8)} + (26p^2) \phantom{+(-8)} \\
 \phantom{(1-p)p^2} \phantom{(-3)p^6} \phantom{+(3p^5)} \phantom{+(6)p^5} \phantom{+(-6p^4)} \phantom{+(12)p^4} \phantom{+(-12p^3)} \phantom{+(-26)p^3} \phantom{+(26p^2)} + (p^2) \phantom{+(-8)} + (4p) \phantom{+(-8)} + (-8)
 \end{array}$$

Coefficient list:

{3, -6, -12, 26}