

3.

Which of the following is the Quotient of  $-3k^6 - 3k^5 + 18k^4 + 10k^3 - 25k^2 + 4k + 8$  divided by  $(1 - k)k^2$

$$\begin{array}{r}
 \phantom{(1-k)k^2} \phantom{(-3)k^6} \phantom{+(-3)k^5} \phantom{+(18)k^4} + (\boxed{3k^3}) + (\boxed{6k^2}) + (\boxed{-12k}) + (\boxed{-22}) \\
 \hline
 (\boxed{1-k})k^2 \phantom{+} (-3)k^6 \phantom{+} + (-3)k^5 \phantom{+} + (18)k^4 \phantom{+} + (10)k^3 \phantom{+} + (-25)k^2 \phantom{+} + (4)k \phantom{+} + (8) \\
 \phantom{(1-k)k^2} (\boxed{-3k^6}) \phantom{+} + (\boxed{3k^5}) \\
 \phantom{(1-k)k^2} \phantom{(-3k^6)} + (-6)k^5 \phantom{+} + (18)k^4 \phantom{+} + (10)k^3 \phantom{+} + (-25)k^2 \phantom{+} + (4)k \phantom{+} + (8) \\
 \phantom{(1-k)k^2} \phantom{(-3k^6)} + (\boxed{-6k^5}) \phantom{+} + (\boxed{6k^4}) \\
 \phantom{(1-k)k^2} \phantom{(-3k^6)} \phantom{(-6k^5)} + (12)k^4 \phantom{+} + (10)k^3 \phantom{+} + (-25)k^2 \phantom{+} + (4)k \phantom{+} + (8) \\
 \phantom{(1-k)k^2} \phantom{(-3k^6)} \phantom{(-6k^5)} + (\boxed{12k^4}) \phantom{+} + (\boxed{-12k^3}) \\
 \phantom{(1-k)k^2} \phantom{(-3k^6)} \phantom{(-6k^5)} \phantom{(12k^4)} + (22)k^3 \phantom{+} + (-25)k^2 \phantom{+} + (4)k \phantom{+} + (8) \\
 \phantom{(1-k)k^2} \phantom{(-3k^6)} \phantom{(-6k^5)} \phantom{(12k^4)} + (\boxed{22k^3}) \phantom{+} + (\boxed{-22k^2}) \\
 \phantom{(1-k)k^2} \phantom{(-3k^6)} \phantom{(-6k^5)} \phantom{(12k^4)} \phantom{(22k^3)} + (\boxed{-3k^2}) \phantom{+} + (\boxed{4k}) \phantom{+} + (\boxed{8})
 \end{array}$$

Coefficient list:

$\{3, 6, -12, -22\}$