

2.

Which of the following is the Quotient of  $-3c^6 + 12c^5 - 3c^4 - 44c^3 + 64c^2 - 21c - 8$  divided by  $(-c - 2)(2 - c)^2$

$$\begin{array}{r}
 \phantom{(-c-2)(2-c)^2} + (3c^3) + (-6c^2) + (3c) + (2) \\
 \hline
 (-c-2)(2-c)^2 \quad (-3)c^6 + (12)c^5 + (-3)c^4 + (-44)c^3 + (64)c^2 + (-21)c + (-8) \\
 \phantom{(-c-2)(2-c)^2} (-3c^6) + (6c^5) + (12c^4) + (-24c^3) \\
 \phantom{(-c-2)(2-c)^2} + (6)c^5 + (-15)c^4 + (-20)c^3 + (64)c^2 + (-21)c + (-8) \\
 \phantom{(-c-2)(2-c)^2} + (6c^5) + (-12c^4) + (-24c^3) + (48c^2) \\
 \phantom{(-c-2)(2-c)^2} + (-3)c^4 + (4)c^3 + (16)c^2 + (-21)c + (-8) \\
 \phantom{(-c-2)(2-c)^2} + (-3c^4) + (6c^3) + (12c^2) + (-24c) \\
 \phantom{(-c-2)(2-c)^2} + (-2)c^3 + (4)c^2 + (3)c + (-8) \\
 \phantom{(-c-2)(2-c)^2} + (-2c^3) + (4c^2) + (8c) + (-16) \\
 \phantom{(-c-2)(2-c)^2} + (-5c) + (8)
 \end{array}$$

Coefficient list:

$\{3, -6, 3, 2\}$