Which of the following is the Quotient of $-3g^6-3g^5+21g^4+13g^3-43g^2-7g+31$ divided by $(-g-1)(1-g)^2$ $+ (3 a^3)$ $+ (6 a^2)$ + (- 12 g $\left(\left(-g-1 \right) \left(1-g \right)^2 \right) \left(-3 \right) g^6 \\ + \left(-3 \right) g^5 \\ + \left(21 \right) g^4 \\ + \left(13 \right) g^3 \\ + \left(-43 \right) g^2 \\ + \left(-7 \right) g^4 \\ + \left(-7 \right) g^4 \\ + \left(-8 \right) g^4 \\ + \left(-8 \right) g^6 \\ + \left(-8 \right)$ $+((-3 g^3))$ $+(-6)q^5 + (18)q^4 + (16)q^3 + (-43)q^2 + (-7)q + (31)$ $+((-6 g^5)) + ((6 g^4)) + ((6 g^3))$ $+(12) g^4 + (10) g^3 + (-37) g^2 + (-7) g$ $+((12 g^4)) + ((-12 g^3)) + ((-12 g^2)) + ((12 g))$ $+ (22) g^3$ $+(-25)g^2 + (-19)g$ $+((22 g^3))$ $+((-22 g^2)) + ((-22 g)) + ((22))$ $-3 g^{2}$ + (3 g) Coefficient list:

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