

Week 1 Investigation

Complete every question. Show full working for every second question.

Perform the indicated operations.

- $(2x^2 - 6x + 11) + (-3x^2 + 7x - 2)$
- $(-4y^2 - 3y + 8) - (2y^2 - 6y - 2)$
- $-6(2q^2 + 4q - 3) + 4(-q^2 + 7q - 3)$
- $2(3r^2 + 4r + 2) - 3(-r^2 + 4r - 5)$
- $(0.613x^2 - 4.215x + 0.892) - 0.47(2x^2 - 3x + 5)$
- $0.5(5r^2 + 3.2r - 6) - (1.7r^2 - 2r - 1.5)$
- $-9m(2m^2 + 3m - 1)$
- $6x(-2x^3 + 5x + 6)$
- $(3t - 2y)(3t + 5y)$
- $(9k + q)(2k - q)$
- $(2 - 3x)(2 + 3x)$
- $(6m + 5)(6m - 5)$
- $\left(\frac{2}{5}y + \frac{1}{8}z\right)\left(\frac{3}{5}y + \frac{1}{2}z\right)$
- $\left(\frac{3}{4}r - \frac{2}{3}s\right)\left(\frac{5}{4}r + \frac{1}{3}s\right)$
- $(3p - 1)(9p^2 + 3p + 1)$
- $(3p + 2)(5p^2 + p - 4)$
- $(2m + 1)(4m^2 - 2m + 1)$
- $(k + 2)(12k^3 - 3k^2 + k + 1)$
- $(x + y + z)(3x - 2y - z)$
- $(r + 2s - 3t)(2r - 2s + t)$
- $(x + 1)(x + 2)(x + 3)$
- $(x - 1)(x + 2)(x - 3)$
- $(x + 2)^2$
- $(2a - 4b)^2$
- $(x - 2y)^3$
- $(3x + y)^3$