

Quadratic Functions Review

Operations with Polynomials

Simplify each expression below.

1. $(4y + 5) + (-7y - 1)$

2. $(4k^2 + 8k + 2) - (2k + 3)$

3. $(2w^2 - 3w + 1) + (4w - 7)$

4. $(5a^2 + 6a + 2) - (7a^2 - 7a + 5)$

5. $-\frac{2}{3}n^2(-9n^2 + 3n + 6)$

6. $-2(3m^3 + 5m + 6) + 3m(2m^2 + 3m + 1)$

7. $5jk(3jk + 2k)$

8. $6t(2t - 3) - 5(2t^2 + 9t - 3)$

9. $(4c + 6)(c - 4)$

10. $(6h - 3)(4h - 2)$

11. $(2h + 3)(2h^2 + 3h + 4)$

12. $(3y^2 + 2y + 2)(3y^2 - 4y - 5)$

Find the solution to each word problem below.

13. The polynomial $s^3 - 70s^2 + 1500s - 10800$ models the profit a company makes on selling at item at price s . A second item sold at the same price brings in a profit of $s^3 - 30s^2 + 450s - 5000$. Write a polynomial that expresses the total profit from the sale of both items.

14. Write an expression to represent the area of the triangle below.

