Simplify:

1. \(\frac{21x^4y^7}{3xy^2}\)

2. \(\frac{(2ab)^3}{4a^3b}\)

3. \((3x^2 + 8x - 7) + (2x^2 - 4x + 10)\)

4. \((7x^2 - xy + 10y^2) - (-3x^2 + 3xy - 2y^3)\)

Find the product:

5. \((x - 9)(2x^2 + 4x - 9)\)

6. \((x^3 + 4x - 5)(2x^2 - 7x + 1)\)

7. \((3x + 7z)^2\)

8. \((\frac{x}{4} + 6y)(\frac{x}{4} + 6y)\)

Simplify and write answer without negative exponents:

9. \(\frac{(5^3r^2s^3)^{-2}}{5^2r^3s^2}\)

Write in scientific notation:

10. \(9,310,000,000\)

Write in standard notation:

11. \(3.4 \times 10^7\)

Divide:

12. \(\frac{7x^2 - 4x + 4}{2x^2}\)

13. \(\frac{15x^2 + 19x - 5}{3x + 2}\)
14. \( \frac{4x^3 + 11x^2 - 8x - 11}{x + 3} \)