

Synthetic Division

Name: _____

Period: _____

Directions: Divide each pair of polynomials using synthetic division. **Show all work.**

1. $(x^3 + 9x^2 + 13x - 35) \div (x + 5)$

2. $(x^3 - 10x^2 + 23x + 4) \div (x - 4)$

3. $(x^4 + 7x^3 + 6x^2 - 13x + 18) \div (x + 3)$

4. $(x^4 - 6x^3 - 51x + 14) \div (x - 7)$

5. $(2x^3 - 3x^2 - 2x + 45) \div (2x + 5)$

6. $(6x^3 + 16x^2 - 17x - 17) \div (3x - 4)$

7. $(12x^4 - 19x^3 + 9x + 2) \div (4x - 1)$

8. $(10x^3 - 26x^2 + 37x - 9) \div (5x - 3)$

9. $(8x^4 + 6x^3 - 5x^2 + 6x - 9) \div (2x - 1)$

10. $(24x^4 + 6x^3 + 19x^2 - 11x - 24) \div (4x + 3)$