

Name _____
Mr. Schlansky

Date _____
Algebra 2

Dividing Polynomials With $(x + a)$

Divide each of the following polynomials using synthetic division

1. $\frac{x^2 + 3x - 4}{x + 4}$

2. $\frac{x^2 + 7x + 5}{x + 1}$

3. $\frac{x^2 - 10x - 21}{x + 2}$

4. $\frac{-x^2 - 8x + 33}{x + 10}$

5. $\frac{5x^4 + 17x^3 + 10x^2 - 5}{x + 3}$

6. $\frac{2x^4 - 3x^3 + 6x^2 - 5}{x + 3}$

7. $\frac{2x^3 - x - 2}{x - 4}$

8. $\frac{2x^3 - 3x^2 + 2x + 5}{x - 5}$

$$9. \frac{x^3 + 5x^2 - 1}{x + 2}$$

$$10. \frac{x^4 - 2x^2 - 7x + 12}{x + 6}$$

$$11. \frac{2x^3 + 5x^2 - 31x - 84}{x + 3}$$

$$12. \frac{4x^3 + 12x^2 - 5}{x + 5}$$

$$13. \frac{6x^3 - 5x + 3}{x - 3}$$

$$14. \frac{5x^3 - 60}{x - 2}$$

$$15. \frac{x^2 + x - 4}{x - 3}$$

$$16. \frac{-3x^2 + 10x - 6}{x + 1}$$