

PreCalculus
WS: Chapter 2/7 Prerequisite Skills

Name _____
Date _____ Block _____

In 1 - 2, divide using long division.

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

2. $(12x^4 + 23x^3 - 9x^2 + 15x + 4) \div (3x - 1)$

In 3 - 4, divide using synthetic division.

3. $(2x^5 - 15x^3 - 9x^2 + 11x + 12) \div (x + 2)$

4. $(x^4 - 17x^3 + 81x^2 - 65x - 56) \div (x - 8)$

In 5 - 6, solve each system of equations algebraically.

$x + 5y - 7z = 6$

5. $y - 3z = 7$

$z = -4$

$x + y = 1$

6. $y - z = -4$

$3x + 7 = 1$

In 7 - 12, factor *completely*.

7. $3x^2 - 17x + 10$

8. $8x^2 - 10x - 3$

9. $10x^2 - 2xy + 15xy - 3y^2$

10. $x^4 - 9x^2 + 20$

11. $24x^3 - 54x$

12. $21x^2 + 25x - 4$