

Name: _____ Class: _____ Date: _____

Algebra 2 CP Chapter 6 Test Practice: WORK ON SEPARATE PAPER!

1. Divide using long division: $(4x^4 - 5x^3 + 2x^2 - x + 5) \div (x - 2)$.
2. Divide using long division: $(6x^4 - 5x^3 - x^2 + 3) \div (3x^2 - x + 2)$.
3. Factor and solve $25x^3 - 50x^2 - 9x + 18$ given that $(x - 2)$ is a factor.
4. Factor the polynomial $h(x) = 3x^3 + 23x^2 + 37x - 15$ given that $h(-5) = 0$. Then find the zeros.
5. Find all the possible zeros of the polynomial function $y = x^4 - 5x^3 - 7x^2 + 29x + 30$.
6. Find all the possible zeros of the polynomial function $y = 9x^3 - 27x^2 - 100x + 300$.
7. Find all the zeros of the polynomial function $y = x^3 - x^2 + 4x - 4$.
8. Find all the zeros of the polynomial function $y = x^3 - 5x^2 - x + 21$.
9. Write a polynomial function that satisfies the given conditions: degree = 3; zeros = -3, 2, -7.
10. Write a polynomial function that satisfies the given conditions: degree = 4; zeros = -2, 4, $3i$.