

### 3/26 Honors Sub Assignment – Solving Cubic Polynomials

Do work on separate paper!

*NO WORK = NO CREDIT!*

Factor and solve each of the following polynomials.

42.  $125x^3 + 216 = 0$

43.  $81x^3 - 192 = 0$

44.  $x^4 - 64 = 0$

45.  $-2x^4 + 46x^2 = -100$

46.  $27 = -x^4 - 12x^2$

47.  $x^5 - 5x^3 + 4x = 0$

48.  $x^4 - 100 = 0$

49.  $5x^3 = 5x^2 + 12x$

50.  $64 - x^3 = 0$

51.  $x^3 - 6x^2 + 6x = 0$

52.  $2x^3 = 5x^2 + 12x$

53.  $3x^4 + 12x^2 - 15 = 0$

54.  $x^3 + 3x^2 - 4x - 12 = 0$

55.  $x^3 - 5x^2 + 3x + 9 = 0$

56.  $4x^3 - 16x^2 + 12x = 0$

57.  $2x^4 - 14x^3 + 12x^2 = 0$

58.  $4x^4 - 2x^2 - 4 = 2$

59.  $9x^4 - 9x^2 + 2 = 20$

60. **Open-Ended** To solve a polynomial equation, you can use any combination of graphing, factoring, and the Quadratic Formula. Write and solve an equation to illustrate each method.

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