2nd Hour – Solving Polynomials "Quest" Review Guide

Do all of your work on a separate piece of paper!

DIRECTIONS: Solve the following polynomials by the graphing method. Check each of your zeros algebraically to verify that they are solutions to the polynomial.

1) $x^3 - 4x^2 - 7x = -10$ 2) $4x^3 - 8x^2 + 4x = 0$ 3) $2x^3 + 5x^2 = 7x$

4) $2x^4 - 5x^3 - 3x^2$ 5) $4x^3 = 4x^2 + 3x$

6) State the formula for the SUM OF CUBES.

7) State the formula for the DIFFERENCE OF CUBES.

*****Remember that you need to have both the sum and difference of cubes formulas memorized for tomorrow; along with the quadratic formula…**

DIRECTIONS: **FACTOR** and **SOLVE** the following polynomials. You need to make sure to pay attention as to when you need to use sum/difference of cubes and when you factor out a GCF then completely factor.

8) $x^3 - 6x^2 + 9x = 0$ 9) $x^3 + 27 = 0$ 10) $2x^3 - 18x^2 + 40x = 0$ 11) $x^3 - 125 = 0$

12) $3x^3 - 2x^2 - 5x = 0$ 13) $27x^3 + 1 = 0$ 14) $8x^3 - 27 = 0$ 15) $64x^3 - 216 = 0$

***** Expect to see a question about something that we covered on our last polynomial test as well… Maybe brush up on graphing polynomials or the process of long division?**

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