

Math III– Unit 3 HONORS Quiz Review

For question 1 - 3, **(a) simplify** and write in standard form and **(b) classify** using the degree and # of terms.

1. $(8x^3 + 14x^2 - 2) + (-2x^3 + 7)$

a. _____

b. _____

2. $(x^5 - 10x^3 + 5x - 3) - (x^4 - 5x^3 + 1)$

a. _____

b. _____

3. $(3x + 6)(2x - 4)$

a. _____

b. _____

4. Find the length of the rectangular room if the area

is $x^2 + 16x + 60$ and the width is $x + 10$.

Factor Completely. SHOW ALL WORK. (Standard Math 3 SKIP #10).

5. $x^2 + 3x - 40$

6. $2x^2 - 10x + 8$

7. $2x^3 - 13x^2 - 7x$

8. $x^4 + 4x^2 - 12$

9. $12x^5 - 2x^4 - 30x + 5$

10. $8x^3 + 216y^3$

Solve by factoring. Show ALL work and give exact answers.

11. $x^2 - x + 4 = 0$

12. $2x^2 + 15x = 8$

13. **Solve by square roots. Give exact answers.**

$2x^2 + 18 = 0$

14. **Solve by completing the square. Give exact answers.**

$$2x^2 - 24x + 10 = 0$$

15. **Solve by the quadratic formula. Give exact answers.**

$$2x^2 - 7x + 8 = 0$$