

Name: \_\_\_\_\_  
8A; Algebra 1

Date: \_\_\_\_\_  
Period \_\_\_\_\_

### Homework

Factor the following completely

1)  $4x^2 - 4$

2)  $st^2 - 9s$

3)  $3x^2 - 27y^2$

4)  $63c^2 - 7$

5)  $z^3 - z$

6)  $x^4 - 1$

7)  $\pi c^2 - \pi d^2$

8)  $4r^2 - 4r - 48$

9)  $4x^2 - 6x - 4$

10)  $2ax^2 - 2ax - 12a$

11)  $a^4 - 10a^2 + 9$

12)  $5x^4 + 10x^2 + 5$

13) The volume of a rectangular solid is represented by  $12a^3 - 5a^2b - 2ab^2$ . Find the algebraic expressions that could represent the dimensions of the solid.

14) Mike said that since  $4a^2 - a^2b^2$  is the difference of two squares, the factors are  $(2a + ab)(2a - ab)$ . Has Mike factored  $4a^2 - a^2b^2$  into prime polynomial factors? Explain why or why not.