Rawafed Private School

مدرسة الروافد الخاصة

Subject: MATHEMATICS	**Date: / 4 /2016**
Name: _____	**Grade: 08_____**

Factoring Difference of two squares $(a^2 - b^2)$

Conditions for Difference of two Squares

1) Must be a binomial with **subtraction**. $x^2 - 36$

2) First and second terms must be **perfect squares**.

$\{x^2, a^4, b^6, y^8, 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, \ldots\}$

$(x)(x) = x^2$ $(x)(x) = x^2$ $(9)(9) = 81$

Examples: Factor the following

- $x^2 - 36 = (x+6)(x-6)$
- $x^2 - 49 = (x+7)(x-7)$
- $9x^2 - 16y^2 = (3x+4y)(3x-4y)$

Factor each binomial

1. $x^2 - 1 =$_____
2. $x^2 - y^2 =$_____
3. $d^2 - 81 =$_____
4. $16 - a^2 =$_____

5. $4 - c^2 =$_____

6. $4x^2 - y^2 =$_____

7. $64a^2 - 16b^2 =$_____

8. $100 - 49a^2 =$_____

9. $64a^2 - 16b^2 =$_____

10. $100 - 49a^2 =$_____

11. $a^4 - b^4 =$_____

12. $m^4 - 16 =$_____

13. $16x^6 - 1 =$_____

14. $81x^2y^2 - 1 =$_____