Name _____   Date_____

DOTS: Difference of Two Perfect Squares ($a^2 - b^2$)

Factoring Difference of Two Squares:

1. Both terms must be ___Squares___ and have a ___Minus___ between them. $a^2 - b^2$

2. Check the binomial for GCF.

3. Use two sets of parentheses (one's a plus, one's a minus). $(a+b)(a-b)$

4. Split up what it takes to make the 1st a perfect square and what takes the 2nd to be a perfect square. $(a+b)(a-b)$

Factor out the following using the DOTS method:

1. $81n^2 - 169$

$(9n+13)(9n-13)$

2. $4x^2 - 121y^2$

$(2x+11y)(2x-11y)$

3. $2x^2 - 50$ $\quad 2(x^2-25)$

$2(x+5)(x-5)$

4. $3b^2 - 48$ $\quad 3(b^2-16)$

$3(b+4)(b-4)$

5. $b^4 - 1296$

$(b^2+36)(b^2-36)$

$(b^2+36)(b+6)(b-6)$

6. $25x^2 - 36$

$(5x+6)(5x-6)$

7. $49x^2 - 144y^2$

$(7x+12y)(7x-12y)$

8. $x^2 - 4y^2$

$(x+2y)(x-2y)$

9. $64r^2 - 1$

$(8r+1)(8r-1)$

10. $25x^2 - 49y^2$

$(5x+7y)(5x-7y)$

11. $121 - 49x^2$

$(11+7x)(11-7x)$

$(7x+11)(-7x+11)$

12. $2x^3 - 162x$ $\quad 2x(x^2-81)$

$2x(x+9)(x-9)$