

Algebra 2 – Difference of Squares Worksheet

Name: Key Hour: _____

Factor the following expressions using the Difference of Squares Formula : $a^2 - b^2 = (a + b)(a - b)$

1. $x^2 - 100$

Answer: $(x+10)(x-10)$

2. $x^2 - 64$

Answer: $(x+8)(x-8)$

3. $9 - x^2$

Answer: $(3+x)(3-x)$

4. $x^2 - 1$

Answer: $(x+1)(x-1)$

5. $x^2 - 16$

Answer: $(x+4)(x-4)$

6. $81 - x^2$

Answer: $(9+x)(9-x)$

7. $144 - x^2$

Answer: $(12+x)(12-x)$

8. $x^2 - 169$

Answer: $(x+13)(x-13)$

9. $x^2 - 4$

Answer: $(x+2)(x-2)$

10. $49 - x^2$

Answer: $(7+x)(7-x)$

The following 5 problems will need to be factored twice. First you'll factor out the GCF, then you'll factor using a difference of squares.

11. $3x^3 - 75x$

Answer: $3x(x+5)(x-5)$

$3x(x^2 - 25)$

12. $5x^4 - 80x^2$

Answer: $5x^2(x+4)(x-4)$

$5x^2(x^2 - 16)$

13. $2x^2 - 242$

Answer: $2(x+11)(x-11)$

$2(x^2 - 121)$

14. $3x^5 - 27x$

Answer: $3x(x^2+3)(x^2-3)$

$3x(x^4 - 9)$

$3x((x^2)^2 - 3^2)$

15. $8x^2 - 512$

Answer: $8(x+8)(x-8)$

$8(x^2 - 64)$