

## DOTS

2.  $4x^2 - 81y^2$

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

6.  $45x^2 - 245$

$5(9x^2 - 49) * GCF$   
 $5(3x - 7)(3x + 7)$

8.  $32x^2 - 50$

$2(16x^2 - 25) * GCF$   
 $2(4x - 5)(4x + 5)$

13.  $3x^2 - 75$

$3(x^2 - 25) * GCF$   
 $3(x + 5)(x - 5)$

15.  $49x^2 - 144 = 0$

$(7x - 12)(7x + 12) = 0$

$x = \frac{12}{7} \quad x = -\frac{12}{7}$

## SOTS

4.  $x^2 + 25$

$(x + 5i)(x - 5i)$

11.  $16x^2 + 121$

$(4x + 11i)(4x - 11i)$

16.  $625x^2 + 36 = 0$

$(25x - 6i)(25x + 6i) = 0$   
 $x = -\frac{6i}{25} \quad x = \frac{6i}{25}$

20.  $324x^2 = -1$

$324x^2 + 1 = 0$   
 $(18x + i)(18x - i) = 0$   
 $x = -\frac{i}{18} \quad x = \frac{i}{18}$

## Trinomial w/ a < 1

1.  $x^2 - 3x - 28$

$(x - 7)(x + 4)$

9.  $3x^2 + 36x + 81$

$3(x^2 + 12x + 27) * GCF$

$3(x + 3)(x + 9)$

## Trinomial w/ a > 1

3.  $7x^2 - 59x + 24$

$(7x - 3)(x - 8)$

5.  $5x^2 - 8x - 4$

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

7.  $30x^2 - 93x - 42$

$3(10x^2 - 31x - 14) * GCF$   
 $3(5x + 2)(2x - 7)$

10.  $2x^2 - 3x - 9$

$(2x + 3)(x - 3)$

12.  $3x^2 + 16x + 20$

$(3x + 10)(x + 2)$

14.  $2x^2 + 13x + 20$

$(2x + 5)(x + 4)$

17.  $4x^2 = 5 - 19x$

$4x^2 + 19x - 5 = 0$

$(4x - 1)(x + 5) = 0$

$x = \frac{1}{4} \quad x = -5$

18.  $12x^2 - 46x - 8 = 2 - 8x$

$12x^2 - 38x - 10 = 0$

$2(6x^2 - 19x - 5) = 0$

## Trinomial w/ a > 1

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19.  $19x^2 - 15 = -10x^2$

$10x^2 + 19x - 15 = 0$

$(2x + 5)(5x - 3) = 0$

$x = -\frac{5}{2} \quad x = \frac{3}{5}$

21.  $3x^2 + 2x + 3 = 3x$

$3x^2 - x + 3 = 0$

does not factor

22.  $3x^2 - 11x + 10 = 0$

$(3x - 5)(x - 2) = 0$

$x = \frac{5}{3} \quad x = 2$