

Unit 5 Part 1

Lesson 2

Difference of Squares

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Lesson 5 → Difference of Squares Factoring

► Multiply (Distribute):

1. $(x-3)(x+3)$ FOIL x^2-9

$$x^2 + \cancel{3x} + \cancel{3x} - 9$$
$$x^2 - 9$$

2. $(x+7)(x-7)$

$$x^2 - \cancel{7x} + \cancel{7x} - 49$$
$$x^2 - 49$$

3. $(2x+5)(2x-5)$

$$4x^2 - \cancel{10x} + \cancel{10x} - 25$$
$$4x^2 - 25$$

4. $(x^3-4)(x^3+4)$ x^6-16

$$x^6 + \cancel{4x^3} - \cancel{4x^3} - 16$$
$$x^6 - 16$$

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✓ Factoring Difference of Squares → $a^2 - b^2 = (a - b)(a + b)$

✓ Perfect Squares:

1	4	9	16	25	36	49	64	81	100
121	144	169	196	225	256	289	324	361	400

1. $x^2 - 64$

$(x+8)(x-8)$

$x^2 - 8x + 8x - 64$

$x^2 - 64$

2. $x^2 - 4$


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

3. $x^4 - 36$

$(x^2 + 6)(x^2 - 6)$


2 Terms!


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<p>4. $16x^2 - 1$</p> <p>$(4x+1)(4x-1)$</p> <p>$16x^2 - 4x + 4x - 1$</p>	<p>5. $x^{10} - 9y^2$ half powers</p> <p>$(x^5+3y)(x^5-3y)$</p>	<p>6. $81x^6 - y^2$</p> <p>$(9x^3-y)(9x^3+y)$</p>
<p>➤ Two – Step Factoring : Factor Completely *** Check for a GCF first!!</p>		
<p>7. $2x^2 - 32$</p> <p>$2(x^2 - 16)$</p> <p>$2(x+4)(x-4)$</p>	<p>8. $3x^3 - 12x$</p> <p>$3x(x^2 - 4)$</p> <p>$3x(x+2)(x-2)$</p>	<p>9. $x^8y^5 - x^6y$</p> <p>$x^6y(x^2y^4 - 1)$</p> <p>$x^6y(xy^2+1)(xy^2-1)$</p>
<p>$2(x-4)(x+4)$</p>	<p>$3x(x^2+2x-2x-4)$</p> <p>$3x(x^2-4)$ $3x^3-12x$</p>	<p>Created with Doceri </p>

1. $x^2 - 25$	2. $4x^2 - 49$
3. $16x^2 - 25y^2$	4. $8x^2 - 32$
5. $81 - z^2$	6. $9x^2 - 36$

! GCF FIRST!

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7. $2x^2 - 242$	8. $x^4 - 144y^2$
9. $49 - x^2$	10. $x^4 - 16$
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