

6.5 Factoring Special Binomials

Study 6.5 # 1-17, 41, 45-55,
59, 61, 63, 69

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6.5 Factoring Special Binomials

Previous Multiplication

$(x + 1)(x - 1)$	$(2x + 3)(2x - 3)$
F O I L	F O I L
$x(x) + x(-1) + 1x + 1(-1)$	$2x(2x) + 2x(-3) + 2x(3) + 3(-3)$
$x^2 - x + x - 1$	$4x^2 - 6x + 6x - 9$
$x^2 - 1$	$4x^2 - 9$

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6.5 Factoring Special Binomials

Previous Multiplication

$$\begin{array}{c} (a + b)(a - b) \\ \text{F} \quad \text{O} \quad \text{I} \quad \text{L} \\ a(a) + a(-b) + a(b) + b(-b) \\ a^2 - ab + ab - b^2 \\ a^2 - b^2 \end{array}$$

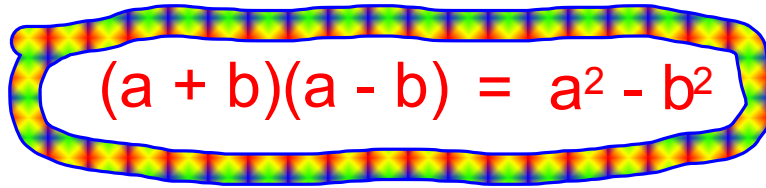
$$(a + b)(a - b) = a^2 - b^2$$

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$$(a + b)(a - b) = a^2 - b^2$$

$$(x + 3)(x - 3) =$$

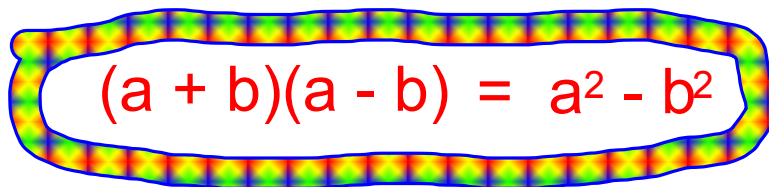
$$(2x + 3)(2x - 3) =$$

$$(x + y)(x - y) =$$

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

$$(5r + 3)(5r - 3) =$$

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$$(a + b)(a - b) = a^2 - b^2$$

$(x + 3)(x - 3) =$	$x^2 - 9$
$(2x + 3)(2x - 3) =$	$4x^2 - 9$
$(x + y)(x - y) =$	$x^2 - y^2$
$(3x + 2y)(3x - 2y) =$	$9x^2 - 4y^2$
$(5r + 3)(5r - 3) =$	$25r^2 - 9$

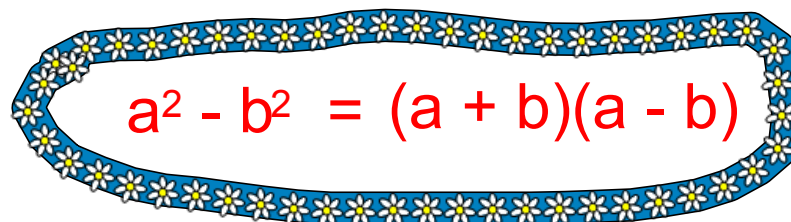
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$$a^2 - b^2 = (a + b)(a - b)$$

$$x^2 - 9$$

$$4x^2 - 9$$

$$x^2 - y^2$$

$$9x^2 - 4y^2$$

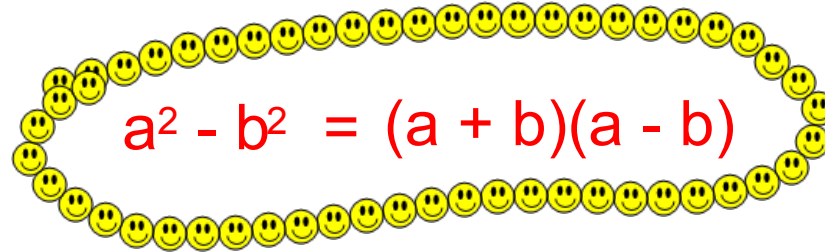
$$25r^2 - 9$$

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$$a^2 - b^2 = (a + b)(a - b)$$

$$t^2 - 9$$

$$45x^2 - 20$$

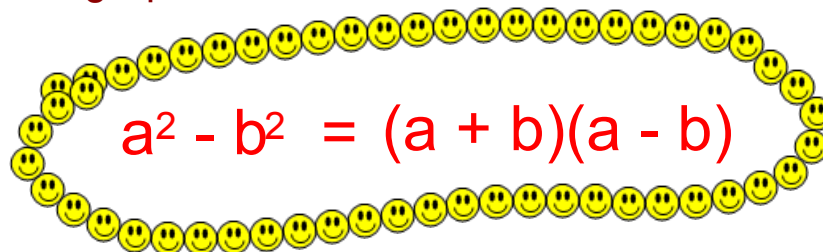
$$50m^3t - 72mt^3$$

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$$a^2 - b^2 = (a + b)(a - b)$$

$$a^4 - 81b^4$$