

Name Key

Hour _____

I can add and subtract polynomials.

Level 1- Beginning

Simplify Each Expression

$(x+4)+(x+5)$ $2x+9$	$(x+6)-(x+7)$ $x+6-x-7$ -1	$(x-8)+(2x+10)$ $3x+2$	$(x-4)-(3x-5)$ $x-4-3x+5$ $-2x+1$
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Level 2- Developing

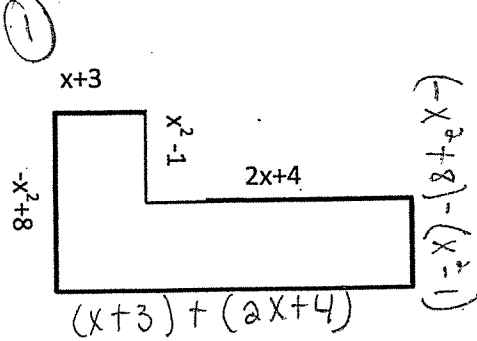
$(2x^2 + 6) + (6x^2 + 6)$ $8x^2 + 12$	$(8x^3 + 9x^2 - 6) + (10x^3 + x^2 - 21)$ $18x^3 + 10x^2 - 27$	$(-4x^4 + 9x^3 + 6x) - (7x^4 + 4x^3 - 11x)$ $-4x^4 + 9x^3 + 6x - 7x^4 - 4x^3 + 11x$ $-11x^4 + 5x^3 + 17x$
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Level 3- Proficient

$(4 - 7x^2 + 9x^4 - 7x) + (2x - 12 + 8x^2)$ $9x^4 + 1x^2 - 5x - 8$	$(-9x^2 - 4x + 2) + (8x^3 + 8x + 3 + 15x^2)$ $-8x^3 - 24x^2 - 12x + 5$
$(3 - 7x^3 + 8x^4 - 13x) + (4 + 9x^2 + 4x^4 + 12x)$ $4x^4 - 7x^3 + 9x^2 - 1x - 1$	$(-3x^3 + x^2 - x) + (5 - 2x^2 + 6x^3 - 4x)$ $3x^3 - 1x^2 - 5x + 5$

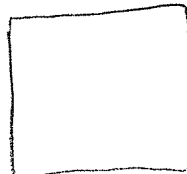
Level 4- Mastery *WORK ON BACK*

Find the Perimeter.



$$-2x^2 + 6x + 30$$

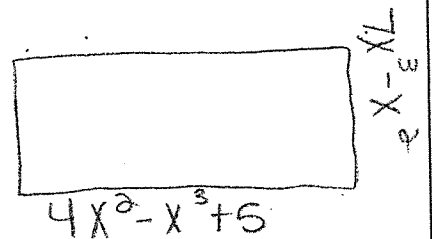
The side length of a square is $3x^2 + x$. Find the perimeter.



$$4(3x^2 + x)$$

$$12x^2 + 4x$$

The length of a rectangle is $(4x^2 - x^3 + 5)$ and the width is $(7x^3 - x^2)$. Find the perimeter.



$$2(4x^2 - x^3 + 5) + 2(7x^3 - x^2)$$

$$8x^2 - 2x^3 + 10 + 14x^3 - 2x^2$$

$$12x^3 + 6x^2 + 10$$

can multiply polynomials.

Level 1- Beginning

Level 2 -Developing

$2x(6x^2 + 9x + 2)$ $12x^3 + 18x^2 + 4x$	$5x^3(x^2 - 3x + 8)$ $5x^5 - 15x^4 + 40x^3$	$-x^6(3x - 4)$ $-3x^7 + 4x^6$	$x^2y^3(2xy^2 - 8y^2)$ $2x^3y^5 - 8x^2y^5$
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Level 3- Proficient

$(3x^2 - 5)(2x - x)$ $6x^3 - 3x^3 - 10x + 5x$ $3x^3 - 5x$	$(2x + 3)^2 (2x + 3)(2x + 3)$ <table border="1"> <tr> <td>$2x$</td><td>$+3$</td></tr> <tr> <td>$4x^2$</td><td>$6x$</td></tr> <tr> <td>$6x$</td><td>9</td></tr> </table> $4x^2 + 12x + 9$	$2x$	$+3$	$4x^2$	$6x$	$6x$	9
$2x$	$+3$						
$4x^2$	$6x$						
$6x$	9						

$$(3x+4)(3x^2+2x+5)$$

	$3x^2$	$2x$	5
$3x$	$9x^3$	$6x^2$	$15x$
4	$12x^2$	$8x$	20

$$9x^3 + 18x^2 + 23x + 20$$

$$(-2x^3+8)(2x^2-4x+1)$$

	$2x^2$	$-4x$	1
$-2x^3$	$-4x^5$	$8x^4$	$-2x^3$
8	$16x^2$	$-32x$	8

$$-4x^5 + 8x^4 - 2x^3 + 16x^2 + 32x + 8$$

Level 4- Mastery

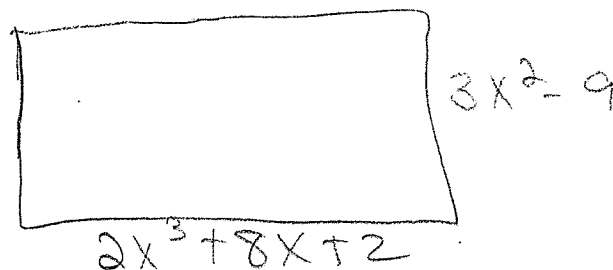
Mrs. Lutsic is building an ice skating rink in her backyard. The length of the of the rectangle is $2x^3 + 8x + 2$ and the width of the rectangle is $3x^2 - 9$.

Determine the expression to represent the area of the ice rink.

$$3x^2 \quad 2x^3 \quad 8x \quad 2$$

	$2x^3$	$8x$	2
$3x^2$	$6x^5$	$24x^3$	$6x^2$
-9	$-18x^3$	$-72x$	-18

$$6x^5 + 6x^3 + 6x^2 - 72x - 18$$



If $x=2$ feet, what is the area?

$$6(2)^5 + 6(2)^3 + 6(2)^2 - 72(2) - 18$$

The area is 102 square feet

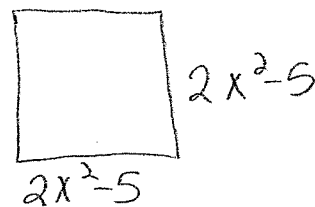
Hadeel is building a square shaped pen to keep her new mini horses. The sides of the pen are represented by $2x^2-5$.

Determine an expression to represent the area of the pen.

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

$$4x^4 - 10x^2 - 10x^2 + 25$$

$$4x^4 - 20x^2 + 25$$



If $x=3$ feet, what is the area?

$$4(3)^4 - 20(3)^2 + 25$$

The area is 169 square feet