11.1 Add and Subtract Polynomials NOTES

Write your questions here!

Monomial:

Degree of a monomial:

Polynomial:

Standard Form:

Coefficient of the first term is called the leading coefficient.

Degree of Polynomial:

Put in standard form; identify degree and leading coefficient of polynomial:

$-4x + 3x^2 - 2 + 4x^3$

Polynomial names

Monomial –
Binomial -
Trinomial -

monomial	$2x$ (1)
binomial	$2x + 3y$ (1, 2)
trinomial	$2x^2 + 3x + 5$ (1, 2, 3)
polynomial	$3x^3 + 2x^2 - 6x + 2$ (1, 2, 3, 4)

Adding Polynomials - just add like terms

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

Subtracting Polynomials - distribute a -1 then add like terms.

$(6x^5 - 3x) - (-4x^5 + 2x - 5)$

$(5x^3 - 2x + 1) - (2x^2 + 4x) + (x^3 + 5x^2 - 8x)$

Try These

1) $(4m^2 - m + 2) + (-3m^2 + 10m + 7)$

2) $(-n^2 + 2n) - (2n^3 - n^2 + n + 12)$

SUMMARY:

Now, summarize your notes here!

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PRACTICE

Directions 1-3: Put each polynomial into standard form and find the degree.		
1) $5x^2 - 4x^3 + 5$	2) $10x^6 - 13x^7$	3) $6 - 4g^2 + 7g + 5g^3$

Directions 4-10: Find each sum or difference.	
4) $(5a^2 - 3) + (8a^2 - 1)$	5) $(7k^2 + 2k - 6) + (3k^2 - 11k - 8)$

6) $(4m^2 - m + 2) + (-3m^2 + 10m + 7)$	7) $(6c^2 + 3c + 9) - (3c - 5)$
8) $(-n^2 + 2n) - (2n^3 - n^2 + n + 12)$	9) $(9b^3 - 13b^2 + b) - (-13b^2 - 5b + 14)$
10) $(9p^2 - 6p + 3 - 11p) + (7p^3 - 3p^2 + 4) - (5p^2 - p^3 + 10)$	

Directions: Describe and correct the error below:

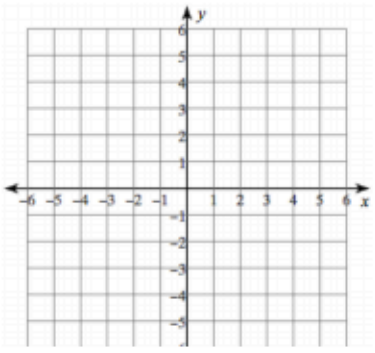
11) $(6x^2 - 5x) - (2x^2 + 3x - 2)$

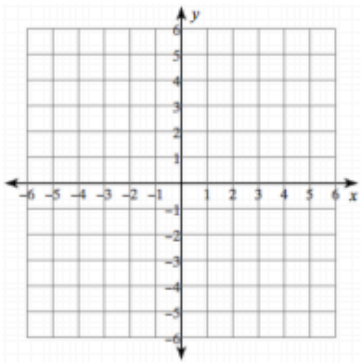
$6x^2 - 5x - 2x^2 + 3x - 2$

$4x^2 - 2x - 2$

SKILLZ REVIEW

Graph.	List all pairs of numbers that multiply to the given number.	Which number pair contains the largest perfect square?
1) x + 5y = -10	2) 48	3) Use 48



4) 3x + y = -5	5) 42	6) Use 42
		

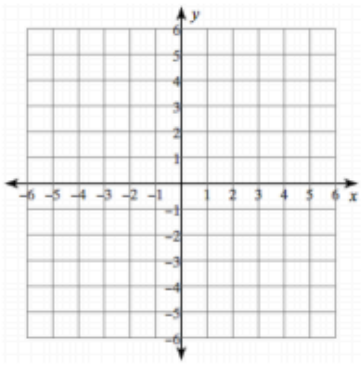
10.1 Add and Subtract Polynomials

APPLICATION

Directions: Simplify each expression:

1) $(7x^3 - 5x^4 - 7x) - (6x^4 + x^3 - 4x)$

2) $(4 - 7v^3 - 3v - 7v^2) + (3v^4 + 7v^2 + 6v^3 + 1)$

4) 3x + y = -5	5) 42	6) Use 42
		

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APPLICATION

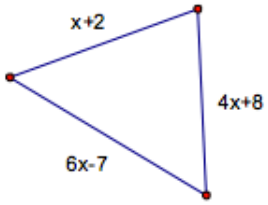
Directions: Simplify each expression:

1) $(7x^3 - 5x^4 - 7x) - (6x^4 + x^3 - 4x)$

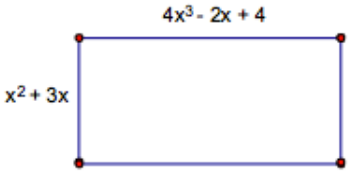
2) $(4 - 7v^3 - 3v - 7v^2) + (3v^4 + 7v^2 + 6v^3 + 1)$

Directions: Write a polynomial that represents the perimeter of the figure.

3)



4)



5) Mr. Brust and Mr. Kelly have invested some of their money in the stock market, which has been fluctuating over time. The projected value of Mr. Brust's assets after t years is $t^3 + 2t^2 - 3t + 400$. Mr. Kelly's projected assets after t years is $t^4 - 5t^2 + 100$.

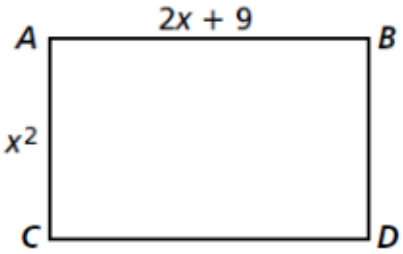
a) How much did each of them invest?

b) What is their combined wealth after 7 years?

c) What is their combined wealth after t years?

5)

Find the perimeter of rectangle *ABCD* in terms of *x*.



6)

The area of the square is $4x^2 - 2x - 6$ in^2. The area of the triangle is $2x^2 + 4x - 5$ in^2. What is the area of the shaded region?