Polynomial Review **Name:** _____

Solve:	16. A cafeteria has two meal plans. One requires the worker to pay $20 for the card, and $1 each time *x* she uses it. The other plan requires the worker to pay $30 for the card, but only $0.50 each time *x* she uses it. After how many uses will the workers with different plans have spent the same amount of money?
17. $x(x-2)+2x(x+3)+10=3x(x-1)+31$	18. $5x^2(2x-3)-x(2x^2+4x-8)=8x(x^2-x)-11x(x-8)$
19. Simplify: $(2x-4)^2$	20. Simplify: $(x+8)^2$
21. Given the points (4, -3) and (-5, 2), write the equation of the line in **slope-intercept**, **standard**, and **point-slope** form.	22. Given the points (-1, 2) and (-3, -3), write the equation of the line in **slope-intercept**, **standard**, and **point-slope** form.

Practice with Polynomials

Name _____ *date* _____ *block* ____

Write each polynomial in standard form. Then name each polynomial by its degree and the number of its terms.

$3m-7m^3+3$	$12x^2-6x^3+7+x$
x^2+x^4	$6+7x$

Find each sum or difference. Write your answer in standard form.

$(d^2+8-5d)-(5d^2+d-2d^3+3)$	$(6c^2+5c-3)-(3c^2+8c)$	$(4x+7x^3-9x^2)+(3-2^2-5x)$
$(2x^2-6x+3)-(2x+4x^2+2)$	$(x^2+15x+13)+(3x^2-15x+7)$	$(2x^3-4x^2+3)+(x^3-3x^2+1)$
$(3y^2-8)+(5y+9)-(y^2+6y-4)$	$(5ab^2+3ab)-(2ab^2+4-8ab)$	$(5x^2+3a^2-5x)+(2x^2-5ax+7x)$

Find the GCF of each polynomial and then factor the polynomial completely.

$8bc^2+24bc$	$4x^4-12x^3+6x^2$
$x^2+5x+7x+35$	$10x^2-12xy-15x+21y$
$6m^4-9m^3+18m^2$	$5z^4-25z^3-20z$
$9-27x^3$	$2x^2+8x-14$

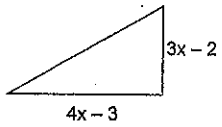
Simplify

$d(-2d + 4) + 15d$	$-x(4x^2 - 2x) - 5x^3$
$3w(6w - 4) + 2(w^2 - 3w + 5)$	$4y(y^2 - 8y + 6) - 3(2y^3 - 5y^2 + 2)$

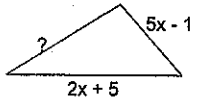
Multiply

$(x + 7)(x + 5)$	$(3m^2 - 7m + 8)(m - 2)$	$(3a + 4)(3a - 5)$
$8x^2y(5x + 2y^2 - 3)$	$(4x + 3)(x - 7)$	$(2x - 1)(x^2 - 7x + 1)$
$(5x - 3)(4x + 2)$	$(x - 5)(2x^2 - 7x - 2)$	$(6x^2 - 5x + 2)(3x^2 + 2x + 4)$

Write an expression to represent the area of the figure.



The perimeter of a triangular park is $16x + 3$. What is the missing length?



Polynomial Review **Name:** _____

Simplify:	1. $(2n + 2)(6n + 1)$	2. $(2a - 1)(8a - 5)$	3. $(-3x + 3)(4x - 2)$
4. $9xy(2x^2 + 9xy - 4xy^2)$	5. $(6n^2 - 6n - 5)(7n^2 + 6n - 5)$	6. A rectangle has a base of $4x - 1$ and a height of $3x + 2$. What is the area?	
7. $5(2k^2 - 3k) - 6k(-k^2 + k - 7)$	8. $5a(4a^2 - 2a) + 3a(-2a + 4a)$	9. $(4x - 8)(4x - 8)$	
10. $(-3x^2y + 2xy^2 - 5) - (-xy^2 - 5)$	11. $(2y - 3)(y^2 + 5y - 1)$	12. $(3x + 4)(5x^2 - 4x + 6)$	
13. $(x^2 - 3x + 6)(2x^2 + 3x + 4)$	14. $(5x - 3)(5x + 3)$	15. $(2b + 4)(2b + 4)$	