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Date _____
Algebra 2

Operations with Polynomials

1. Express $(x^2-5x-2)+(-6x^2-7x-3)$ in simplest terms.

$-x^2-12x-5$

2. Express $(3x^2-8x+1)+(2x^2-3x+5)$ in simplest terms.

$5x^2-11x+6$

3. Express $(-2x^2+5x-7)-(7x^2-3x+2)$ in simplest terms.

$-2x^2+5x-7-7x^2+3x-2$

$-9x^2+8x-9$

4. Express $(7x^2+2x+1)-(2x^2-3x-5)$ in simplest terms.

$7x^2+2x+1-2x^2+3x+5$

$5x^2+5x+6$

5. What is the result when $5m^2+3m-1$ is subtracted from $7m^2-5m+1$?

$(7m^2-5m+1)-(5m^2+3m-1)$

$7m^2-5m+1-5m^2-3m+1$

$2m^2-8m$

6. What is the result when $7xy+5y-2x$ is subtracted from $9xy-5y+3x$?

$(9xy-5y+3x)-(7xy+5y-2x)$

$9xy-5y+3x-7xy-5y+2x$

$2xy-10y+5x$

Express the following in simplest terms

7. $\frac{12x^3-6x^2+2x}{2x}$

$6x^2-3x+1$

8. $\frac{8x^5-2x^4+4x^3-6x^2}{2x^2}$

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

9. $-3x(x-4)-2x(x+3)$

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

$-5x^2+6x$

10. $-3x^2y(5xy^2+xy)$

$-15x^3y^3-3x^3y^2$

11. $(x-4)(x+6)$

	x	-4
x	x^2	$-4x$
$+6$	$+6x$	-24

$x^2+2x-24$

12. $(2x-3)(3x+1)$

	$2x$	-3
$3x$	$6x^2$	$-9x$
$+1$	$+2x$	-3

$6x^2-7x-3$

13. $(x^2+2x-4)(x+3)$

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

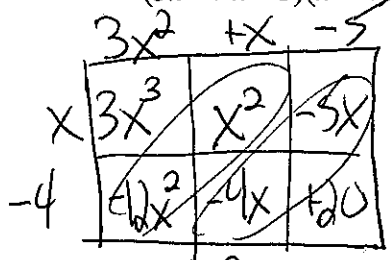
$x^3+5x^2+2x-12$

14. $(2x^2+3x-2)(x-2)$

	$2x^2$	$+3x$	-2
x	$2x^3$	$+3x^2$	$-2x$
-2	$-4x^2$	$-6x$	$+4$

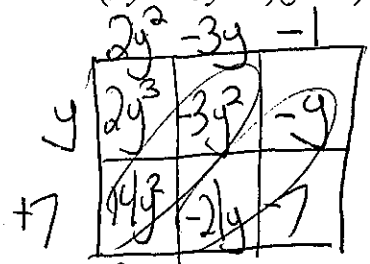
$2x^3-x^2-8x+4$

15. $(3x^2+x-5)(x-4)$



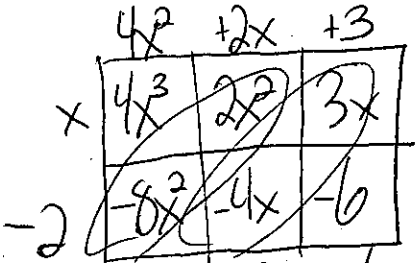
$3x^3-11x^2-9x+20$

16. $(2y^2-3y-1)(y+7)$



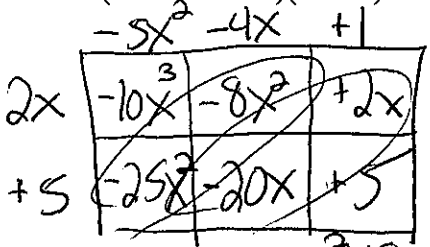
$2y^3+11y^2-22y-7$

17. $(4x^2+2x+3)(x-2)$



$4x^3-6x^2-x-6$

18. $(-5x^2-4x+1)(2x+5)$



$-10x^3-33x^2-18x+5$

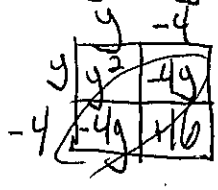
19. $(m+7)^2$

$(m+7)(m+7)$

$m^2+14m+49$

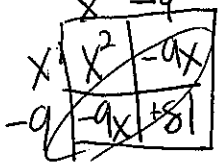
20. $(y-4)^2$

$(y-4)(y-4)$ $y^2-8y+16$



21. $(x-9)^2$

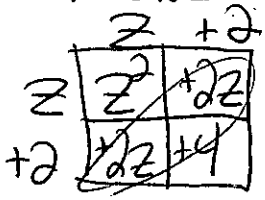
$(x-9)(x-9)$



$x^2-18x+81$

22. $(z+2)^2$

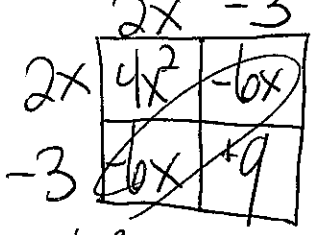
$(z+2)(z+2)$



z^2+4z+4

23. $(2x-3)^2$

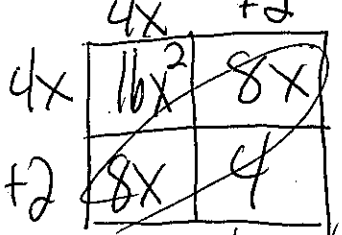
$(2x-3)(2x-3)$



$4x^2-12x+9$

24. $(4x+2)^2$

$(4x+2)(4x+2)$



$16x^2+16x+4$