Unit 8: Quadratic Products
***CUA Review* PreAP**

Name: Key
Date _____ Period: _____

1. Simplify $(-3a^7b^5)(-8a^{-1}b^8)$.

$24a^6b^{13}$

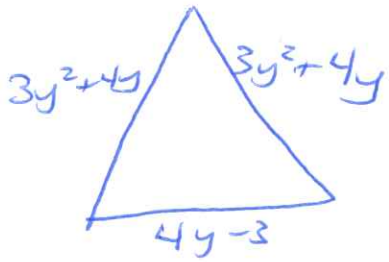
2. Find the area of a square with the side length of $(x+5)$.

$A = s^2$
$A = (x+5)^2$ → $(x+5)(x+5)$
$x^2+10x+25$

3. The lengths of the sides of an isosceles triangle are represented by $(3y^2 + 4y)$ and $(4y - 3)$.

What is the perimeter of the triangle? — CLT

$6y^2+12y-3$



4. Find the product: $(4x - 3)(4x + 3)$

$16x^2-9$

	4x	-3
4x	$16x^2$	$-12x$
+3	$12x$	-9

$-12x+12x = 0x$

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

$-15x^3-6x^2+12x$

	$5x^2$	$2x$	-4
$-3x$	$-15x^3$	$-6x^2$	$12x$

6. Evaluate: $2x^4y^2 - 2x$ for x = -4 and y = 3.

$2(-4)^4(3)^2 - 2(-4)$

4616

7. Evaluate: $2x^3 - 2y^2z$ for x = -2 and y = -3 and z = -1.

$2(-2)^3 - 2(-3)^2(-1)$

2

8. Find the area of a triangle with a base of $(2x - 8)$ and a height of $(x + 4)$

$A = \frac{bh}{2}$

$A = \frac{(2x-8)(x+4)}{2}$

F O I L
$2x^2+8x-8x-32$

$A = \frac{2x^2-32}{2}$

$A = x^2-16$ sq. units

9. Find the area of a rectangle with length of $(2x-1)$ and width of $(2x-4)$

$A = lw$

$A = (2x-1)(2x-4)$

F O I L

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

$4x^2 - 10x + 4$

check

$y_1 =$

$y_2 =$

10. Simplify: $5m^2(3m-4) - 9m(2m+4)$

$15m^3 - 20m^2 - 18m^2 - 36m$

$15m^3 - 38m^2 - 36m$

check

2nd, table

$y_1 = y_2$???

11. Find the perimeter of a rectangle with side lengths of $(3x^3 - 2x + 5)$ and $(2x^2 - 2x - 4)$.

check

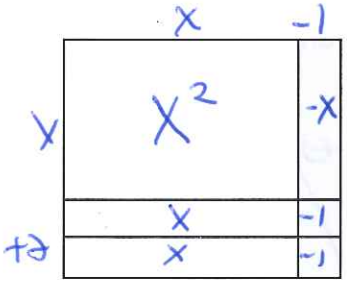
$P = 2(3x^3 - 2x + 5) + 2(2x^2 - 2x - 4)$

cut

$6x^3 - 4x + 10 + 4x^2 - 4x - 8$

$6x^3 + 4x^2 - 8x + 2$

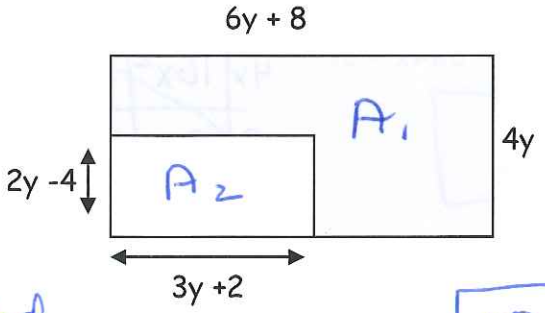
12. Which of the following expression(s) is represented by the algebra tile model: (circle all that apply)



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

$-x^2 - x + 2$ $(x-1)(x+2)$ $(x-2)(x+1)$

13. Find the area of the shaded region.



$A_1 = 4y(6y+8)$

$A_1 = 24y^2 + 32y$

$A_2 = (2y-4)(3y+2)$

F O I L

$6y^2 + 4y - 12y - 8$

$6y^2 - 8y - 8$

Shaded

$(24y^2 + 32y) - (6y^2 - 8y - 8) = 18y^2 + 40y + 8$

14. $y = (x-4)^2$

x-int: (4, 0)

standard form: $y = x^2 - 8x + 16$

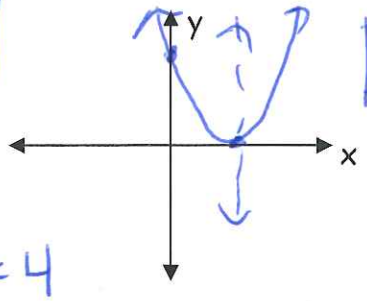
y-int: (0, 16)

vertex (4, 0)

$x = \frac{-b}{2a}$ $x = \frac{-(-8)}{2(1)} = 4$

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

$y = 0$



15. $y = (x+3)(x+5)$

x-int: (-3, 0) (-5, 0)

standard form: $y = x^2 + 8x + 15$

y-int: (0, 15)

vertex: (-4, -1)

$x = \frac{-b}{2a}$ $x = \frac{-(8)}{2(1)}$ $x = -4$

$y = (-4)^2 + 8(-4) + 15$

$y = -1$