

**Unit 8: Quadratic Products**

**CUA Review**

Name: Key  
Date: \_\_\_\_\_ Period: \_\_\_\_\_

1. Simplify:  $-4a^5b^2y(2a^2y - ab + y^4)$

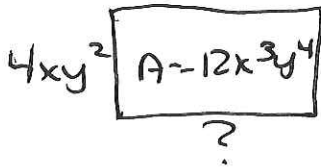
$$\boxed{-8a^7b^2y^2 + 4a^6b^3y - 4a^5b^2y^5}$$

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

$$\boxed{24a^6b^{13}}$$

- multiply coefficients
- add exponents of like bases

3. The area of a rectangle is  $12x^3y^4$ . If the height is  $4xy^2$ , what is the base?



$$b = \frac{A}{h} \quad b = \frac{12x^3y^4}{4xy^2} = \boxed{3x^2y^2}$$

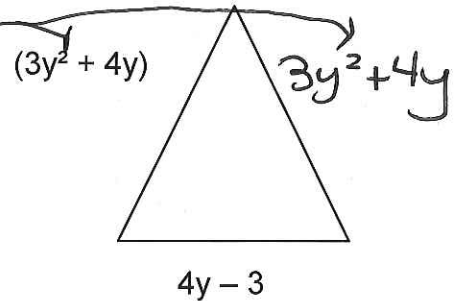
- divide coefficients
- subtract exponents

4. 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?  
ADD (CMT)

$$\boxed{(3y^2 + 4y) + (3y^2 + 4y) + (4y - 3)}$$

$$\boxed{6y^2 + 12y - 3}$$



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

$$\boxed{16x^2 - 9}$$

	$4x$	$-3$	
$4x$	$16x^2$	$-12x$	$= 0x$
$+3$	$12x$	$-9$	

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

$$\boxed{-15x^3 - 6x^2 + 12x}$$

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

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

$$2(-4)^4(3)^2 - 2(-4) \xrightarrow{\text{calc}} \boxed{464}$$

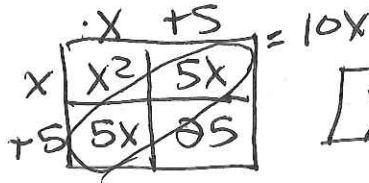
8. Evaluate:  $2x^3 - 2y^2z$  for  $x = -2$  and  $y = 3$  and  $z = -1$

$$2(-2)^3 - 2(3)^2(-1) = \boxed{2}$$

In Calc!  
just like it's written

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

$$A = (x+5)^2$$



$$x^2 + 10x + 25$$

check  
 $y_1 = (x+5)^2$   
 $y_2 =$   
 2 no, table  
 $y_1 = y_2 ?$

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

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

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

$$4x^2 - 10x + 4 \rightarrow y_2 =$$

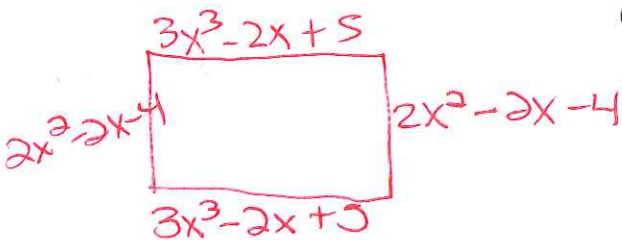
check  
 $y_1 = (2x-1)(2x-4)$

11. Simplify:  $2x^2y(3y-4) - (3x^2y-4y)$     1) Distribute    2) CLT

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

$$6x^2y^2 - 11x^2y + 4y$$

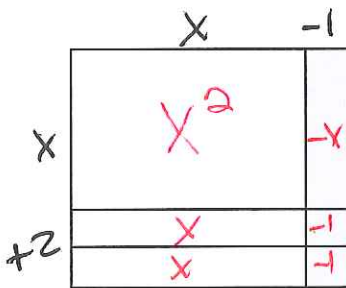
12. Find the perimeter of a rectangle with side lengths of  $(3x^3 - 2x + 5)$  and  $(2x^2 - 2x - 4)$ .



CLT

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

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



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

$x^2 + x - 2$

$x^2 + 3x - 2$

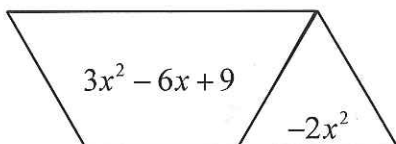
$-x^2 - x + 2$

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

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

$x^2 + x - 2$

14. Find the total area of the polygon, given the area of each of its parts.



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

CLT!