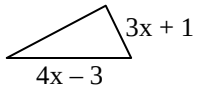
Math A2 Homework: Week of October 9 – 12

Monday, October 8 - Off - Columbus Day

Tuesday, October 9

1. If the perimeter of the triangle to the right can be represented as $12x - 8$, find the length of the missing side in terms of x.



2. The length of a rectangle is 4 more than the width. If w represents the width of the rectangle, represent the perimeter in terms of w.
3. Carissa spent 30 dollars more for sneakers than she did for jeans, and twenty dollars less for a shirt than for jeans. If *j* represents the cost of the jeans, represent the total cost of Carissa's new outfit in terms of *j*.
4. Theresa, Robert and Andrew are playing a polynomial game. Roberts polynomial can be represented by $(3x^2 + 5x - 6)$, Andrew's polynomial can be represented by $(x^2 - 7x + 2)$. Theresa won't tell anyone the value of her polynomial but she does say "If you subtract my polynomial from Robert's polynomial you'll get Andrew's polynomial." What is Theresa's polynomial? And more importantly…why is she being so secretive about it?
5. The area of the big rectangle can be represented by $(2x^2 - 7x + 5)$. The area of the smaller rectangle can be represented by $(x^2 + x - 8)$. In terms of *x* represent the area of the shaded region.

Wednesday, October 10

1. Use the laws of exponents to perform the indicated operations.

a. $(3x^3)(-2x^4)$ b. $\dfrac{12x^5}{-3x^2}$ c. $(2x^5)^3$ d. $\dfrac{12x^4 - 15x^3 + 3x^2}{3x^2}$

e. $(2x^2)(4x) - (3x^3)$ f. $\left(6x^{10}y^5\right)\left(9x^4y^8\right)$ g. $\dfrac{9x^4 \cdot x^8}{3x^5}$ h. $\dfrac{12x^3}{4x^8}$

2. Represent the perimeter of a square whose side is represented by: $4x - 3$
3. Represent the number 0.0000000789 in scientific notation.
4. Karen is two years younger than Nicole. Bryan is four years older than Nicole. If Nicole is *y* years old, express the sum of Karen's, Nicole's, and Bryan's age in terms of *y*.
5. Multiply: $5x(x^2 - 10x + 12)$
6. Subtract $8x^2 - 12x + 15$ from $10x^2 - 10$.

Thursday, October 11

1. Complete worksheet from class. Be sure to show all work!!!
2. Subtract $(2x^2 + 6x - 4)$ from $(6x^2 - 3x - 2)$
3. Solve for y: $6y - bx = m$
4. Solve for x and be sure to check: $4(x + 1) = 2(3x - 1)$

Friday Homework on Back

Friday, October 12

1. Multiply the following:
   a. $6x(2x^2 + 3x + 4)$ b. $(4x + 2)(x - 3)$ c. $(x - 5)^2$
   d. $(4 - x)^2$ e. $(3 - x)(5 + 2x)$ f. $\left(6x^{10}y^5\right)\left(9x^4y^8\right)$
2. Simplify the following expressions:
   a. $\left(2x^3\right)^4$ b. $7x^0 - (6x)^0$ c. $\dfrac{81x^{30} - 63x^{12} + 27x^4}{9x^4}$ d. $\dfrac{3x^6y^2}{9x^3y^4}$
   e. $\left(x^3\right)^0$ f. $\dfrac{14x^{-3}y^8}{7x^2y^{-3}}$ g. $\dfrac{9x^4 \cdot x^8}{3x^5}$ h. 8^{-2}
3. Simplify: Subtract $(2x^2 + 6x - 4)$ from $(6x^2 - 3x - 2)$
4. Solve for y: $my - bn = g$
5. The length of a rectangle is three less than twice its width. If the width is w, what is the perimeter of the rectangle in terms of w?