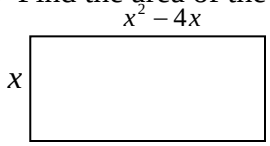
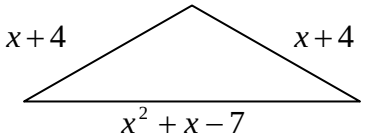
Math A2 – Homework for Week of October 15-19

Monday October 15

1. a) Find the area of the given rectangle.



b) Find the perimeter of the triangle



2. Simplify in terms of x: $(3x^2 + 4x - 10) - (8 - 2x^2 + 4x) + (12x - 7 + x^2)$
3. The length of a rectangle is 2 more than 3 times its width. If the width is represented by w, what is the perimeter of the rectangle in terms of w?
4. What is the area of the same rectangle in terms of w?
5. Simplify:

a. $4x^0 + (3x)^0$ b. $\frac{(2x^2)(6x^8)}{4x^{13}}$ c. $(x-3)^2$ d. $(2x-3)(x+6)$

e. $\frac{8x^{10}y^{-4}}{32x^{-3}y^{-8}}$ f. $(3x-2)^2$ g. $\frac{\left(2x^4\right)\left(24x^{18}\right)}{\left(4x^3\right)^2}$

6. Study for **Quiz TOMORROW**

Tuesday, October 16 → Quiz Today on Polynomials and Exponents

Wednesday, October 17

1. Factor:

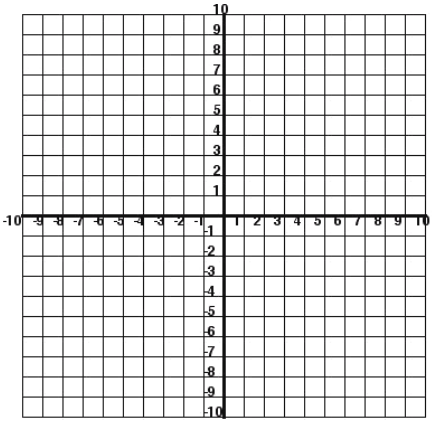
a. $x^2 - 144$ b. $25 - x^2$ c. $25x^2 - 16$ d. $a^2b^2 - 36x^2$

e. $18x - 27y$ f. $2x^2 + 8x + 4$ g. $18x^3 + 60x^5 + 30x^2$ h. $4x^2y^3 - 6xy^2 - 8x^3y$

2. Simplify: $(3x^2 + 2x) + (4x^2 + 3) - (2x - 4)$
3. Express $(x + 4)^2$ as a trinomial
4. Agnus doesn't like people to know her real age. She tells everybody that in $2x^2 + 9x - 5$ years she will be $8x^2 - 3x + 4$ years old. How old is Agnus now?
5. A rectangle has a side of $(2x + 5)$. Find the **area** of the square in terms of *x*. (Draw a diagram!!!)
6. Solve the following system graphically:

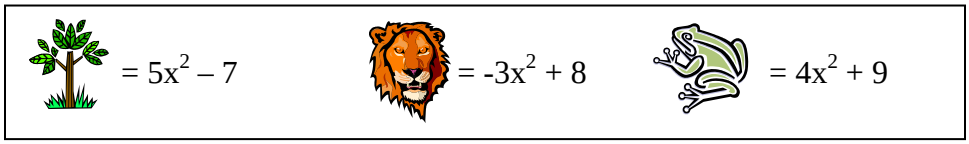
$y = 2x + 1$

$y = -2x + 5$



Thursday, October 18

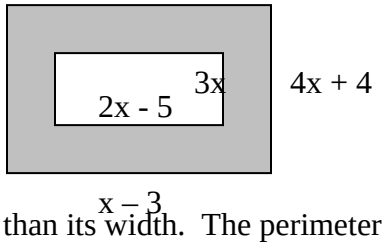
1. Factor the following expressions:
   a. $x^2 + 3x - 10$ b. $x^2 - 2x - 24$ c. $x^2 - 6x + 9$
2. Factor using an appropriate method (DOTS, GCF)
   a. $16x^3 + 12x^2 - 4x$ b. $28x^6 - 14x^3$ c. $7y^2 + 49$ d. $25 - 4x^2$
3. Subtract $3x^2 - 5x + 2$ from $5x^2 + 2x + 6$
4. The admission fee for a small fair is \$1.50 for children and \$4.00 for adults. On a certain day, 850 people enter the fair and a total of \$2,650 is collected. How many children and adults attended the fair that day?
5. Simplify:
   a. $3x^0 - (2x)^0$ b. $(4x^2)(6x^3)$ c. $\frac{12x^9}{2x^3}$ d. $\left(x^5\right)^3$
6. Given the following key, compute the following:



a.  b.  c. 

Friday, October 19

1. Factor the following expressions:
   a. $x^2 + 8x - 20$ b. $5x^3 - 10x + 25x^5$ c. $36 - 49x^2$
   d. $3x^2 - 12x$ e. $x^2 - x - 12$ f. $25x^2 - 144$
2. Given the following picture find the:
   a. Area of the smaller box
   b. Area of the larger box
   c. Area of the shaded region
   d. Perimeter of the smaller box
   e. Perimeter of the larger box



3. The length of a rectangle is 5 meters more than its width. The perimeter is 66 meters. Find the dimensions of the rectangle.
4. Solve for y: $10x - 5y = 50$
5. Simplify:
   a. $\frac{10x^8}{5x^{-8}}$ b. $\frac{3x^4y^{-9}}{12x^3y^{-2}}$ c. $(8x^2 - 4x + 2) - (3x^2 - 7x + 9)$