**Animals Gone Wild Equations Project**

**(A Project in Two Parts)**

Your assignment is to draw an animal on a Cartesian plane. Then you will find the slope of some of the line segments used to draw your animal.

Here’s the instructions for part 1 (you’ll do part 2 during the NEXT chapter):

1. draw a picture of an animal (I encourage you NOT to draw a dog or cat but if you MUST…) on a coordinate plane (I will give you a piece of graph paper). The drawing must take up at least 2/3 of the paper
2. You must include the following twelve lines (actually, line segments):  
   a) one horizontal line  
   b) one vertical line  
   c) two lines with DIFFERENT positive slopes  
   d) two lines with DIFFERENT negative slopes  
   e) two lines that are parallel (these can NOT have the same slope as any of the lines in a, b, c, and d)   
   f) two lines that are perpendicular (these can NOT have the same slope as any of the lines in a, b, c, d, and e)  
   g) a line that goes through  and has a slope of   
   h) a line that goes through  and has a slope of 
3. A few hints when you are drawing the twelve lines:  
   a) you might want to start by drawing the lines in g) and h)  
   b) USE A RULER!  
   c) you should use a “set square” to draw the perpendicular lines  
   d) try to make sure that your lines go through “pretty points”. This will make it easier to find slopes later
4. Photocopy your animal (I can do it if you give it to me before it is due!)
5. Colour the original drawing. Make it pretty, People!!
6. Take the photocopied paper and highlight / bold / mark the twelve lines from part 2.
7. On the photocopied paper – or a separate piece of paper (your choice) – find the slope of each line. You should show me which two points (hopefully, “pretty points”) you used. For six of the lines, use  (draw a triangle between the two points). For the other six lines use , or  (in other words, use the coordinates of the two points).
8. Label, and give the coordinates, of two *x*-intercepts and two *y*-intercepts on your drawing.
9. Answer the following questions:  
   a) what is the rule for the slopes of parallel lines? Did the slopes of your parallel lines follow this rule?  
   b) what is the rule for the slopes of perpendicular lines? Did the slopes of your perpendicular lines follow this rule?  
   c) why did you choose to draw your particular animal?  
   d) OPTIONAL: name your animal

That’s it! It’s all due on January 24th. It’s worth 10% of your mark for the chapter AND I’ll use it for (part of) your MYP mark.

And good news!! The second part of this project will be faster.

[](http://www.bing.com/images/search?q=wild+animals&id=B2373DDB074F1E9596DAC3E81C4CD485EAA70591&FORM=IGRE1)