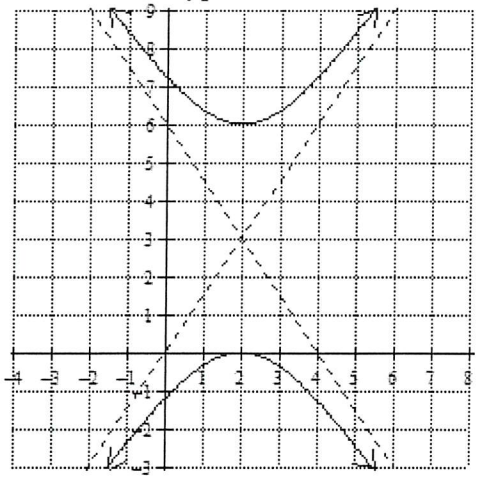
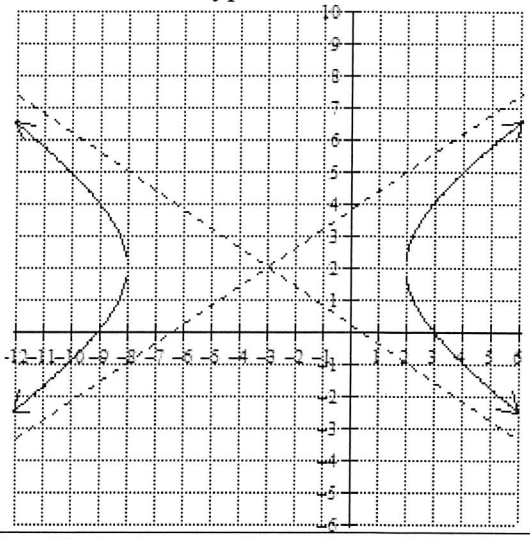
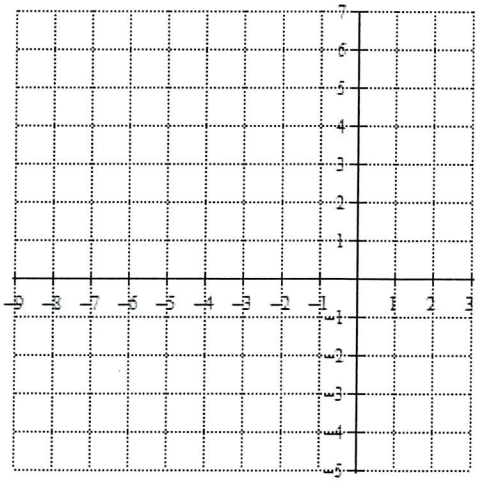
Name_____ Date_____ Period_____

Day #46 Homework

For each hyperbola graphed below, identify the indicated characteristics for questions 1 – 8.

Hyperbola A	Hyperbola B
	
1. Identify the intersection point and the slopes of the asymptotes.	5. Identify the intersection point and the slopes of the asymptotes.
2. Identify the equations of the asymptotes.	6. Identify the equations of the asymptotes.
3. Write the equation in standard form.	7. Write the equation in standard form.
4. Write the equation in general form.	8. Write the equation in general form.

Given the equation of the hyperbola, identify the indicated characteristics of the graph.

Hyperbola C $x^2 - 4y^2 + 6x + 8y + 1 = 0$	Hyperbola D $y^2 - 2x^2 + 6y - 16x - 31 = 0$
9. Write the equation in standard form and then identify the coordinates of the point at which the asymptotes will intersect each other.	13. Write the equation in standard form and then identify the coordinates of the point at which the asymptotes will intersect each other.
10. Identify the transverse axis and give the coordinates of the vertices of the hyperbola.	14. Identify the transverse axis and give the coordinates of the vertices of the hyperbola.
11. Find the equations of the slant asymptotes of the graph of the hyperbola.	15. Find the equations of the slant asymptotes of the graph of the hyperbola.
12. Sketch the graph of Hyperbola C on the grid provided to the right.	

Identify each of the following implicitly defined equations has having a graph that is a circle, an ellipse or a hyperbola. Give a reason for each of your answers based on the equation in the given general form.

16. $x^2+3y^2+4x-12y+2=0$	17. $5x^2-5y^2-15x-15y+10=0$
18. $3x^2+6y^2-9x+12y+15=0$	19. $2x^2+2y^2-4x+8y-6=0$