

PROBLEM SET 3

ELLIPSES

SET A

NAME: _____

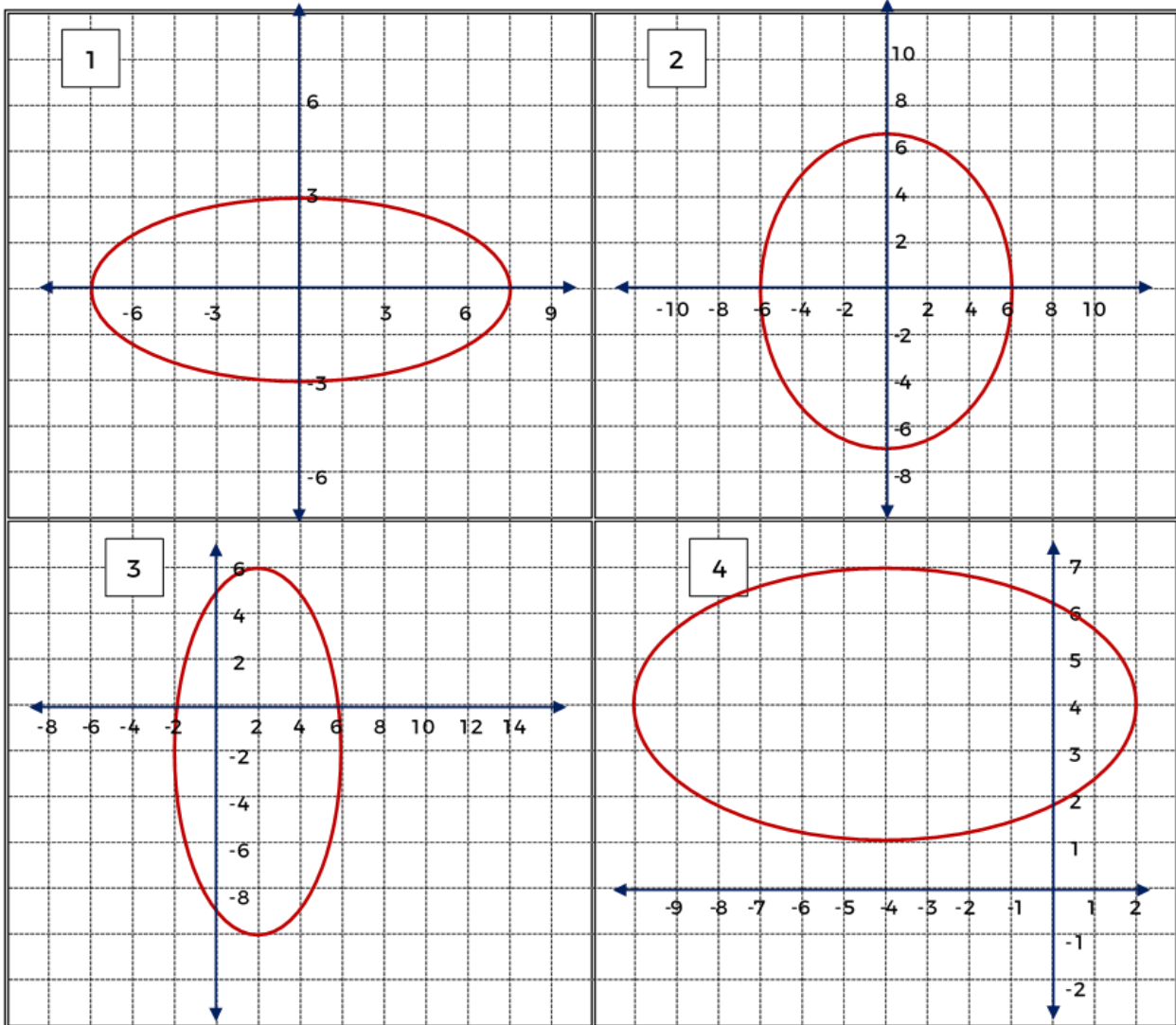
SECTION: _____

STUDENT ID: _____

DATE SUBMITTED: _____

NOTE: Print out this document and write your answers on the spaces provided. Indicate solutions if necessary. **Avoid erasures.**

Part One. Study the graph given in every item below. Then, fill out the table by supplying what is asked under every column based on the graphs (34 points).



	Center	Vertices	Covertices	Major Axis ($2a$)	Minor Axis ($2b$)	Foci	Equation (Standard Form)
1							
2							
3							
4							

Part Two. Given the equation of the ellipse, determine: (a) center; (b) coordinates of the vertices; (c) coordinates of the covertices; and (d) coordinates of the foci (22 points).

	Equation of the Ellipse	Center	Vertices	Covertices	Foci
5	$16x^2 + 81y^2 = 1296$				
6	$64x^2 + 5y^2 = 320$				
7	$\frac{(x + 12)^2}{400} + \frac{(y - 12)^2}{100} = 1$				
8	$(x + 7)^2 + 256(y - 4)^2 = 256$				

Part Three - A. Transform the following equations of ellipses from standard form to general form. No solution, no credit. Box your final answer (8 points).

9. $\frac{(x + 1)^2}{81} + \frac{(y - 2)^2}{49} = 1$

10. $\frac{(x - 3)^2}{3} + \frac{(y + 8)^2}{8} = 1$

Part Three - B. Transform the following equations of ellipses from general form to standard form. No solution, no credit. Box your final answer (8 points).

11. $100x^2 + 25y^2 + 1200x + 1100 = 0$

12. $7x^2 + 3y^2 + 14x - 42y + 133 = 0$
