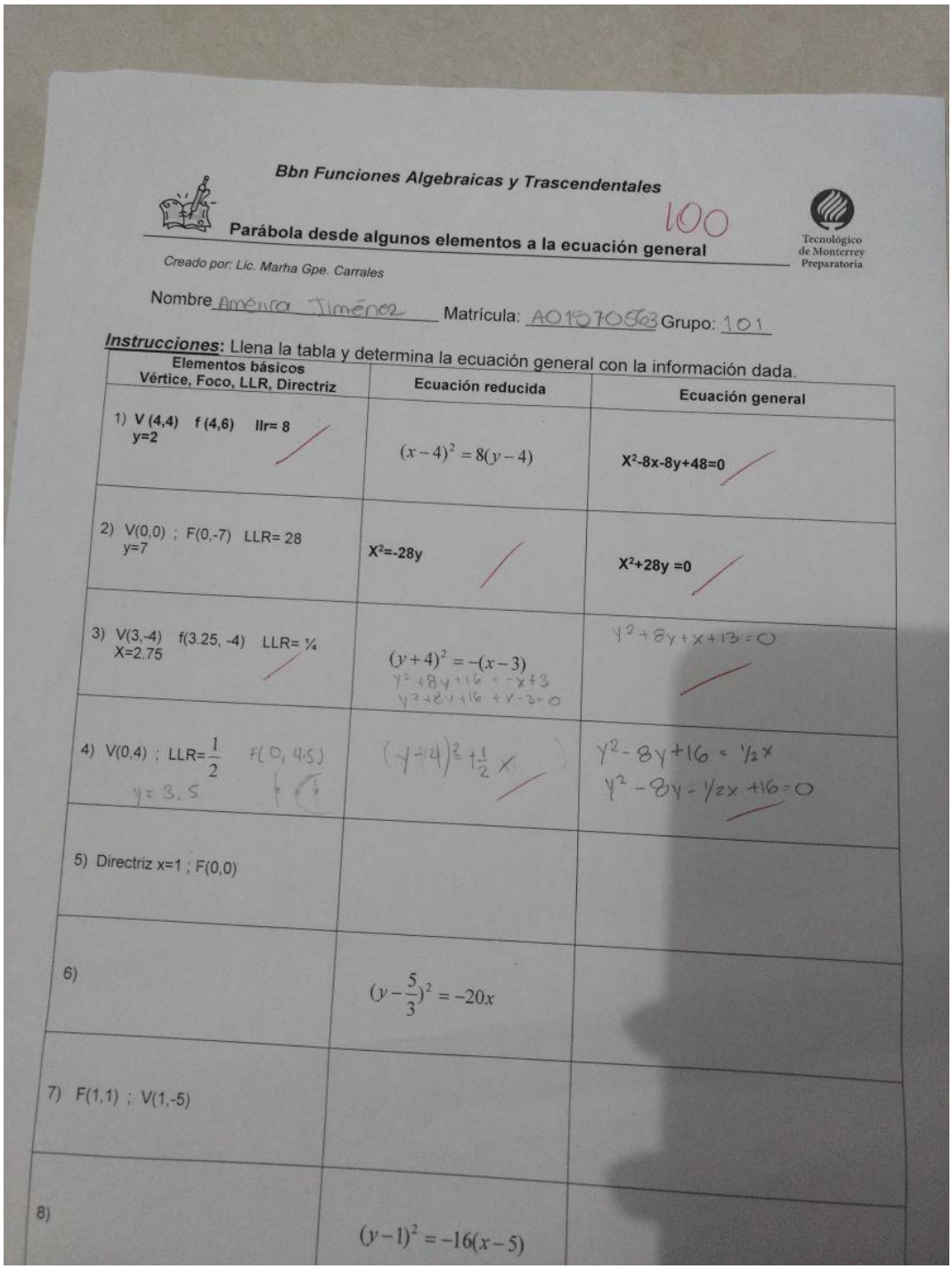
Actividades



Bbn Funciones Algebraicas y Trascendentales

100

Parábola desde algunos elementos a la ecuación general

Tecnológico de Monterrey Preparatoria

Creado por: Lic. Marha Gpe. Carrales

Nombre Amèrica Jiménez Matrícula: A01570563 Grupo: 101

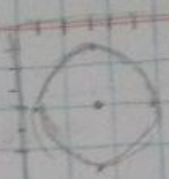
Instrucciones: Llena la tabla y determina la ecuación general con la información dada.

Elementos básicos Vértice, Foco, LLR, Directriz	Ecuación reducida	Ecuación general
1) **V (4,4) f (4,6) llr= 8 y=2**	$(x-4)^2 = 8(y-4)$	**X^2-8x-8y+48=0**
2) V(0,0) ; F(0,-7) LLR= 28 y=7	**X^2=-28y**	**X^2+28y =0**
3) V(3,-4) f(3.25, -4) LLR= ¼ X=2.75	$(y+4)^2 = -(x-3)$ $y^2+8y+16 = -x+3$ $y^2+8y+16+x-3=0$	$y^2+8y+x+13=0$
4) V(0,4) ; LLR= $\frac{1}{2}$ y= 3.5 f(0, 4.5)	$(y-4)^2 = \frac{1}{2}x$	$y^2-8y+16 = \frac{1}{2}x$ $y^2-8y-\frac{1}{2}x+16=0$
5) Directriz x=1 ; F(0,0)		
6)	$(y-\frac{5}{3})^2 = -20x$	
7) F(1,1) ; V(1,-5)		
8)	$(y-1)^2 = -16(x-5)$	

América Timóteo
A01570563

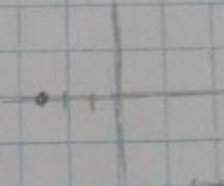
8.05

1. $(x-3)^2+(y+4)^2=5$
   c(3, -4)
   r = 2.5

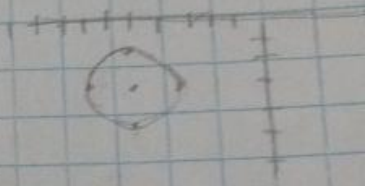


2. $(x-2)^2+(y+\frac{5}{4})^2=-4$
   c(2, $-\frac{5}{4}$)
   r= indefinido

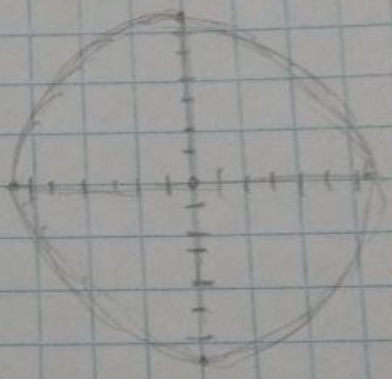
3. $(x+3)^2+y^2=0$
   c(-3, 0)
   r = ∅



4. $(x+5)^2+(y+3)^2=2\sqrt{2}$
   c(-5, -3)
   r = 1.6



5. $x^2+y^2=(\frac{27}{4})^2$
   c(0, 0)
   r = 6.75



Relaciona cada ecuación con la gráf
correspondiente.

4 $(x-4)^2+y^2=\frac{121}{4}$

5 $(x+3)^2+$

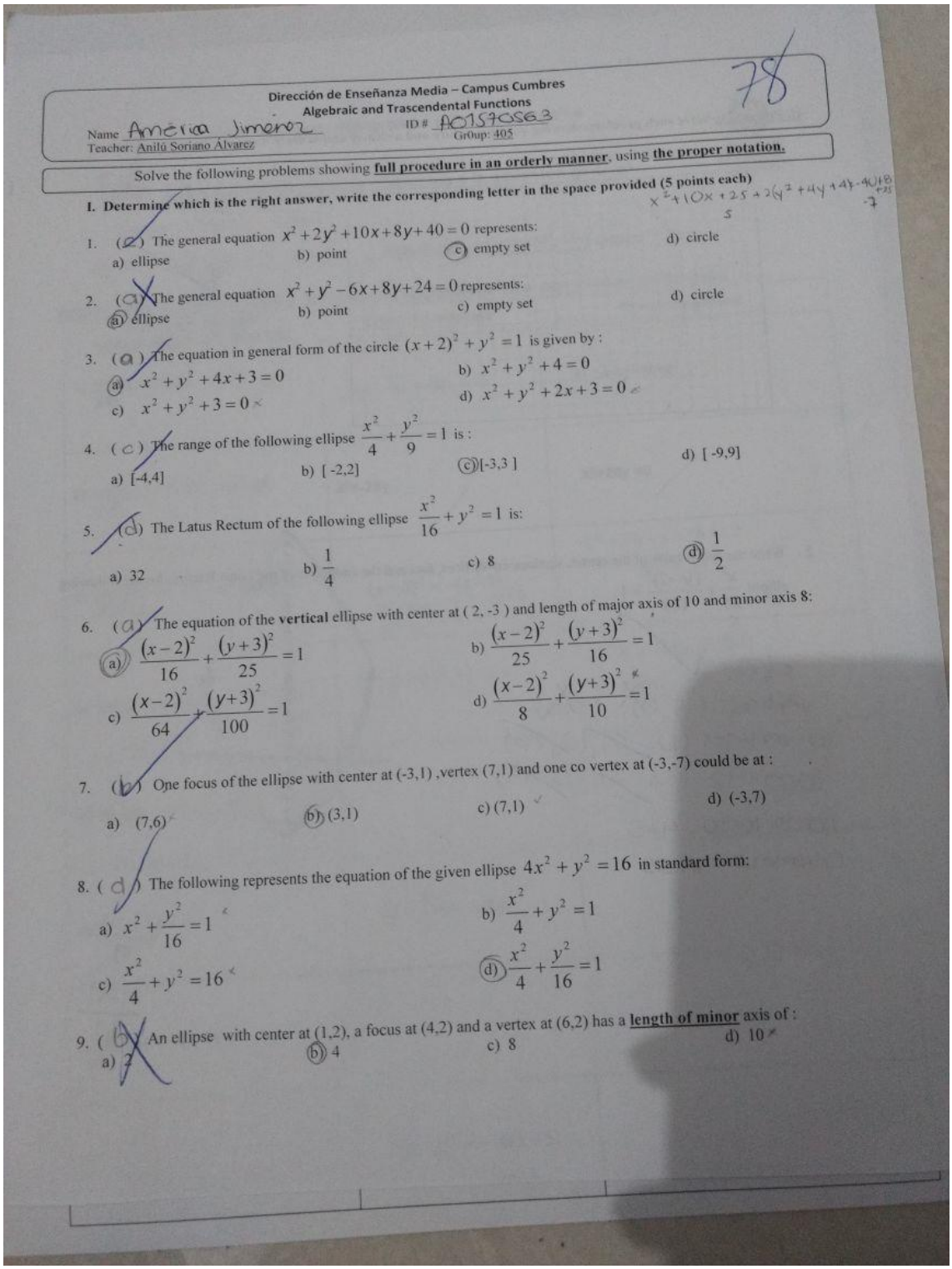
3 $(x-3)^2+(y-7)^2=4$

1 $(x-7)^2+($

6 $(x-2)^2+y^2=\frac{121}{4}$

2 $(x-2)^2$

Quiz



Dirección de Enseñanza Media – Campus Cumbres
Algebraic and Trascendental Functions

Name América Jimenez ID # A01570563
Teacher: Anilú Soriano Álvarez Group: 405

78

Solve the following problems showing **full procedure in an orderly manner**, using **the proper notation.**

I. Determine which is the right answer, write the corresponding letter in the space provided (5 points each)

1. (c) The general equation $x^2+2y^2+10x+8y+40=0$ represents:
a) ellipse b) point (c) empty set d) circle

2. (a) The general equation $x^2+y^2-6x+8y+24=0$ represents:
(a) ellipse b) point c) empty set d) circle

3. (a) The equation in general form of the circle $(x+2)^2+y^2=1$ is given by :
(a) $x^2+y^2+4x+3=0$ b) $x^2+y^2+4=0$
c) $x^2+y^2+3=0$ d) $x^2+y^2+2x+3=0$

4. (c) The range of the following ellipse $\frac{x^2}{4}+\frac{y^2}{9}=1$ is :
a) [-4,4] b) [-2,2] (c) [-3,3] d) [-9,9]

5. (d) The Latus Rectum of the following ellipse $\frac{x^2}{16}+y^2=1$ is:
a) 32 b) $\frac{1}{4}$ c) 8 (d) $\frac{1}{2}$

6. (a) The equation of the **vertical** ellipse with center at (2, -3) and length of major axis of 10 and minor axis 8:
(a) $\frac{(x-2)^2}{16}+\frac{(y+3)^2}{25}=1$ b) $\frac{(x-2)^2}{25}+\frac{(y+3)^2}{16}=1$
c) $\frac{(x-2)^2}{64}+\frac{(y+3)^2}{100}=1$ d) $\frac{(x-2)^2}{8}+\frac{(y+3)^2}{10}=1$

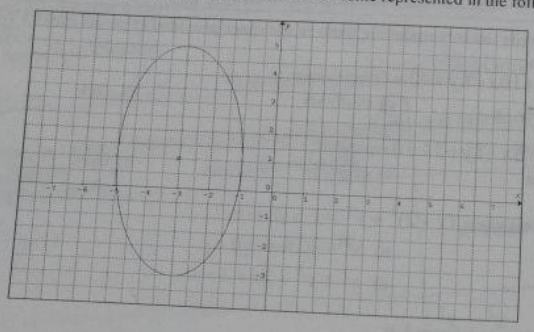
7. (b) One focus of the ellipse with center at (-3,1) ,vertex (7,1) and one co vertex at (-3,-7) could be at :
a) (7,6) (b) (3,1) c) (7,1) d) (-3,7)

8. (d) The following represents the equation of the given ellipse $4x^2+y^2=16$ in standard form:
a) $x^2+\frac{y^2}{16}=1$ b) $\frac{x^2}{4}+y^2=1$
c) $\frac{x^2}{4}+y^2=16$ (d) $\frac{x^2}{4}+\frac{y^2}{16}=1$

9. (b) An ellipse with center at (1,2), a focus at (4,2) and a vertex at (6,2) has a **length of minor** axis of :
a) 2 (b) 4 c) 8 d) 10

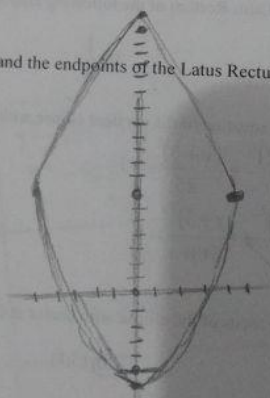
II. Procedure. **Solve each problem, showing your procedure and a clearly and orderly manner. (10 points each)**

1. Write the equation in standard form of the conic represented in the following graph.



$\frac{(x+3)^2}{16} + \frac{(y-1)^2}{64} = 1$

2. Write the coordinates of the center, vertices, co-vertices, foci and the endpoints of the Latus Rectum for the following ellipse $\frac{x^2}{25} + \frac{(y-7)^2}{169} = 1$.



c(0, 7)

vertices: (-5, 0), (5, 0)

Co-vertices (0, -6), (0, 20)

Foco: 12 (0, -5), (0, 19)

Lado recto: 4.5

Extremo Le: 2.25

$\sqrt{a^2 - b^2}$

Foco 12

Le. $\frac{2b^2}{9}$

$\frac{2(25)}{11}$