Respuestas guía 8

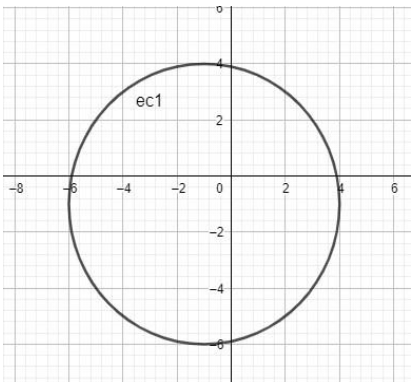
1) a)Centro (-4;0) ; radio 1

b) Centro (7/2; 1); radio $\frac{19\sqrt{5}}{10}$

c) No es una circunferencia

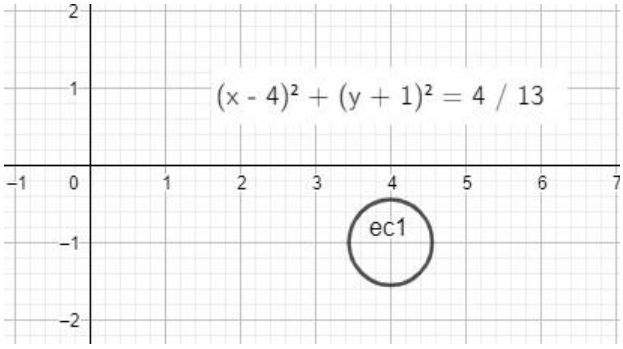
2) Área: 20 π Longitud: 10π

3)a) $x^2 + y^2 + 2x + 2y - 23 = 0$



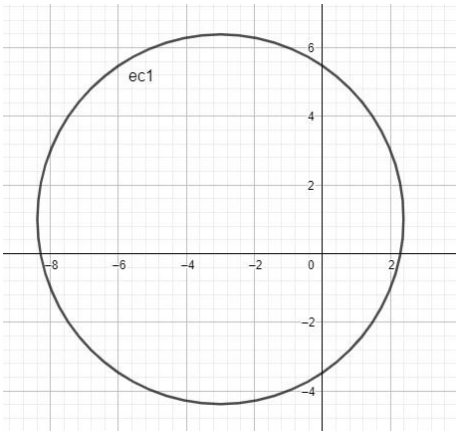
b)

$$(x-4)^2 + (y+1)^2 = \frac{4}{13}$$

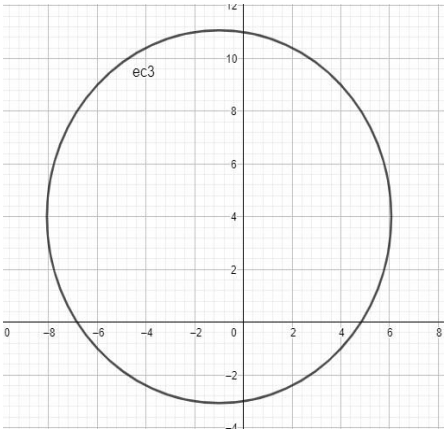


d) $(x+2)^2 + y^2 = 50$

c) $(x+3)^2 + (y-1)^2 = 29$



e) $x^2 + y^2 + 2x - 8y - 33 = 0$



(4)

a) K= -11/9

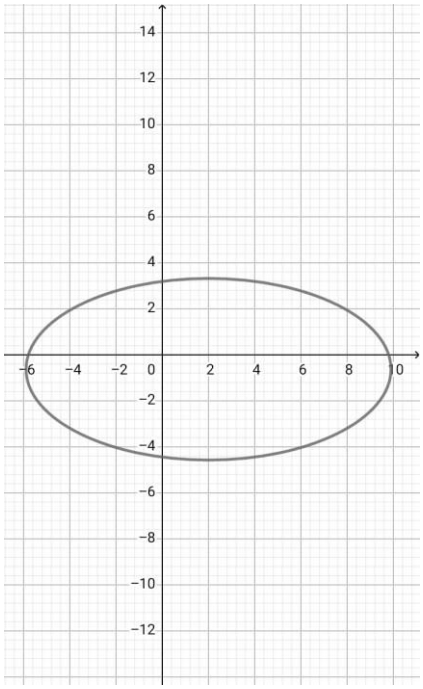
b) K= -1; K=5

(5)

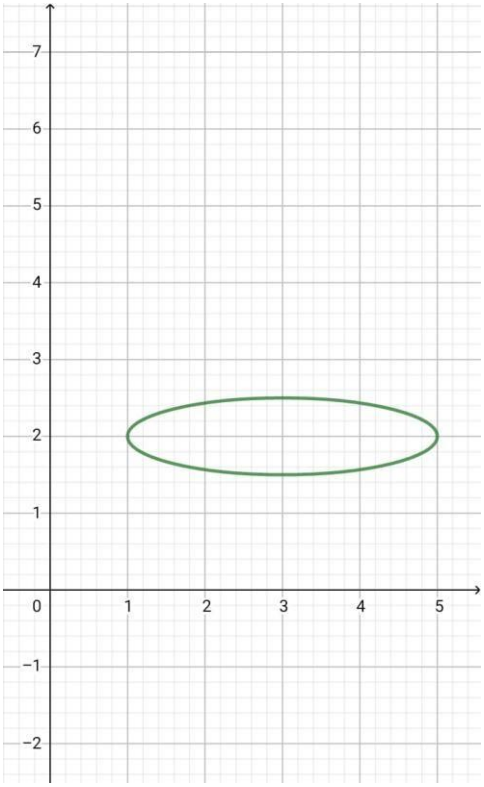
	Ecuación ordinaria	Centro	Focos	Vértice	e	Lado recto
(a)	$\frac{(x-2)^2}{997/16} + \frac{(y+5/8)^2}{997/64} = 1$	$(2; -\frac{5}{8})$	$(2 + \frac{\sqrt{2991}}{8}; -\frac{5}{8})$ y $(2 - \frac{\sqrt{2991}}{8}; -\frac{5}{8})$	$(2 + \frac{\sqrt{997}}{4}; -\frac{5}{8})$ $(2 - \frac{\sqrt{997}}{4}; -\frac{5}{8})$	$\cong 0{,}9$	$\frac{\sqrt{997}}{8} \cong 3{,}9$
(b)	Elipse imaginaria					
(c)	$\frac{(x-3)^2}{4} + \frac{(y-2)^2}{1} = 1$	(3;2)	$(3 - \sqrt{3}; 2)$ $(3 - \sqrt{3}; 2)$	(1;2) (5;2)	$\frac{\sqrt{3}}{2}$	1

Graficas:

a



c



(6)

a) $\frac{x^2}{16}+\frac{y^2}{7}=1$

b) $\frac{x^2}{5}+\frac{y^2}{9}=1$

c) $\frac{\frac{x^2}{43}}{16}+\frac{\frac{y^2}{43}}{4}=1$

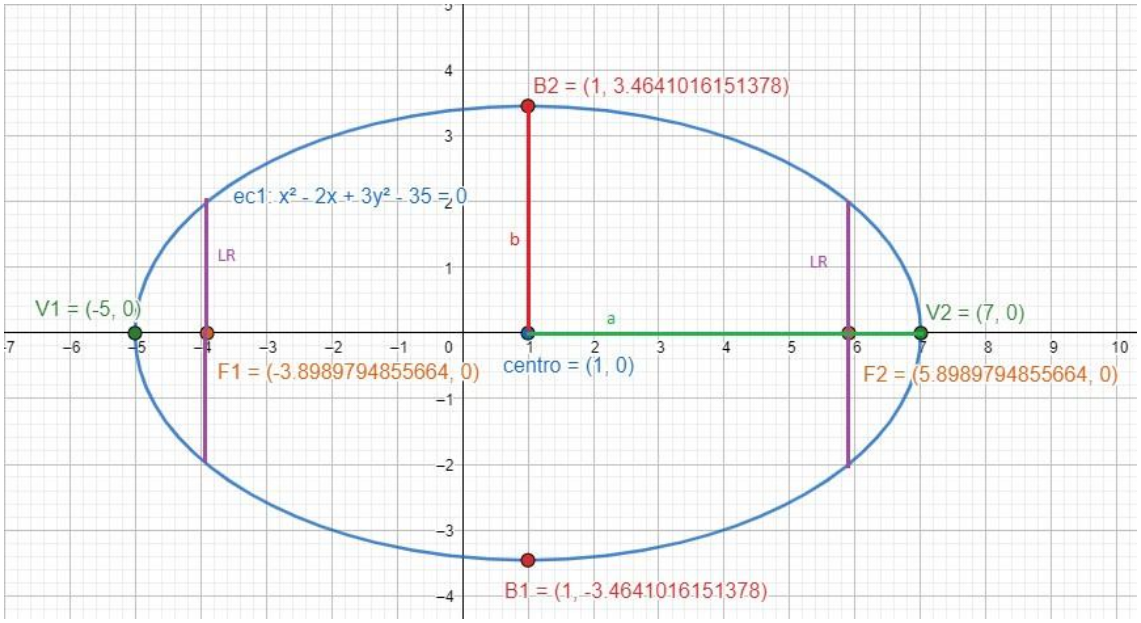
d) $\frac{(x-3)^2}{16}+\frac{(y-5)^2}{25}=1$

e) $\frac{(x-1)^2}{16}+\frac{(y+1)^2}{7}=1$

(7)

h=0; k=1

Ecuación ordinaria	Centro	Focos	Vértice	e	Lado recto
Elipse $\frac{(x-1)^2}{36}+\frac{y^2}{12}=1$	(1,0)	$(1-\sqrt{24},0)$ $(1+\sqrt{24},0)$	$(-5,0)$ $(7,0)$	$\frac{2}{\sqrt{3}}$	4



(8)

a) $k \in \left(-7; \frac{58}{3}\right)$

b) k= -7 ó k = $\frac{58}{3}$

c) $k \in (-\infty; -7) \cup \left(\frac{58}{3}; +\infty\right)$

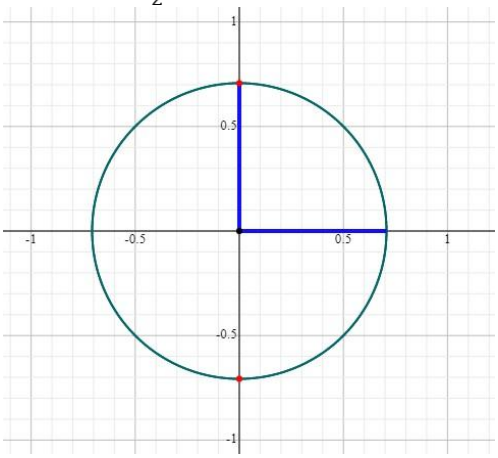
(9)

(a) k = 9 ; h = 4

(b) k = - 18; h = - 16

(10)

$x^2 + y^2 = \frac{1}{2}$

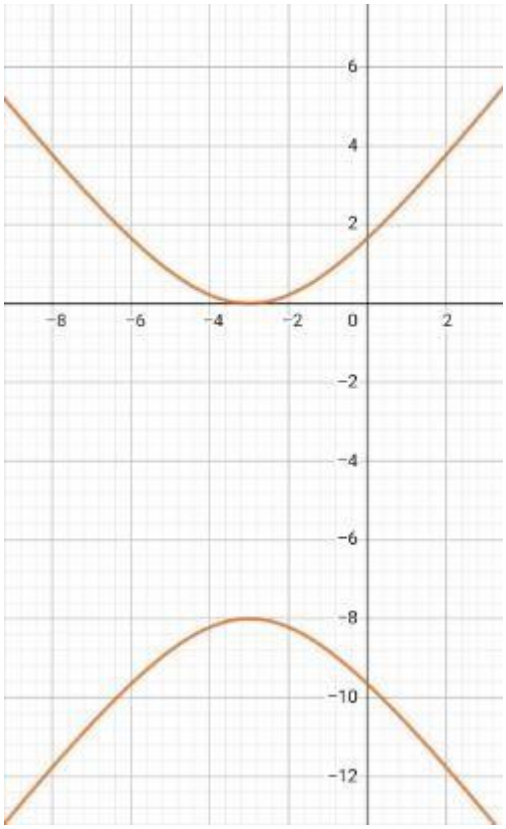


(11) a, b y c Hipérbolas

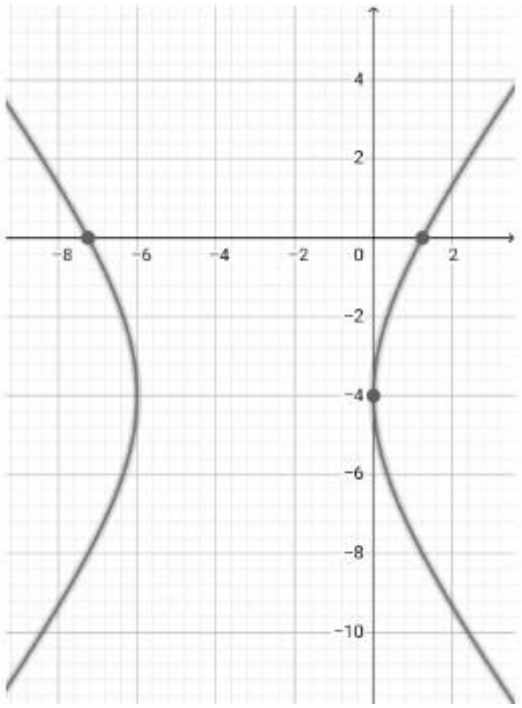
	Ecuación ordinaria	Centro	Focos	Vértices	e	Lado recto	Asíntotas
a	$-\frac{(x+3)^2}{9}+\frac{(y+4)^2}{16}=1$	(-3;-4)	(-3;-9) (-3;1)	(-3;-8) (-3;0)	5/4	9/2	y=3/4x-7/4 y=-3/4x-25/4
b	$\frac{(x+3)^2}{9}-\frac{(y+4)^2}{16}=1$	(-3;4)	(-8;-4) (2;-4)	(0;-4) (6;-4)	5/3	32/3	y=4/3x y=-4/3x-8
c	$-\frac{(x-2)^2}{\frac{64}{9}}+\frac{(y+4)^2}{16}=1$	(2;-4)	$\left(2,-4-\frac{4}{3}\sqrt{13}\right)$ $\left(2,-4+\frac{4}{3}\sqrt{13}\right)$	$(2,-8)$ (2;0)	$\frac{\sqrt{13}}{3}$	32/9	y=3/2x-7 y=-3/2x-1

Graficas:

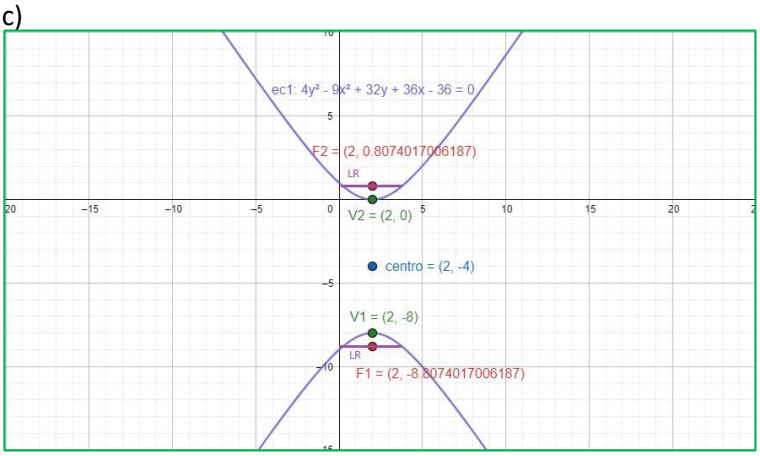
a



b

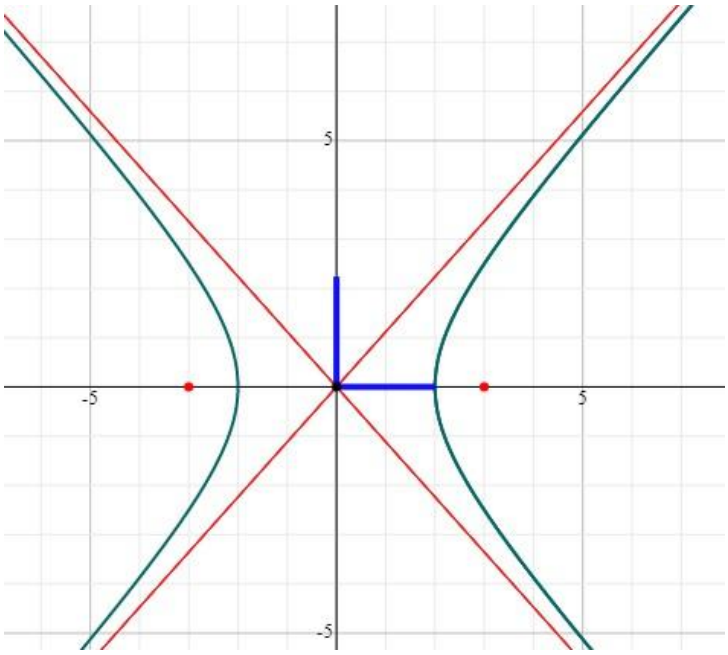


c)

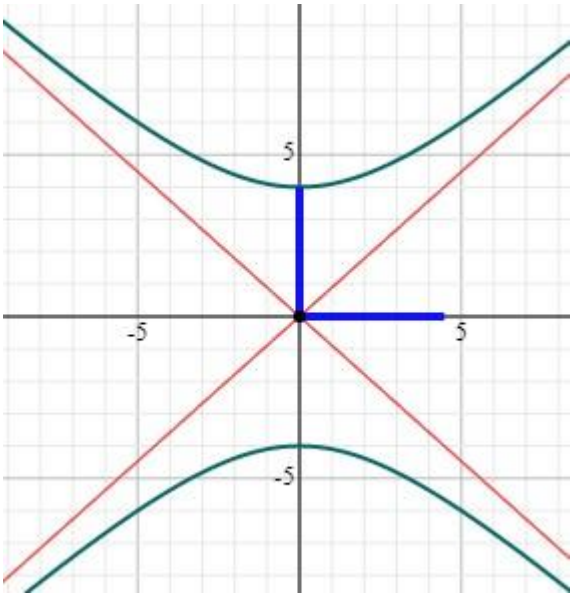


(12)

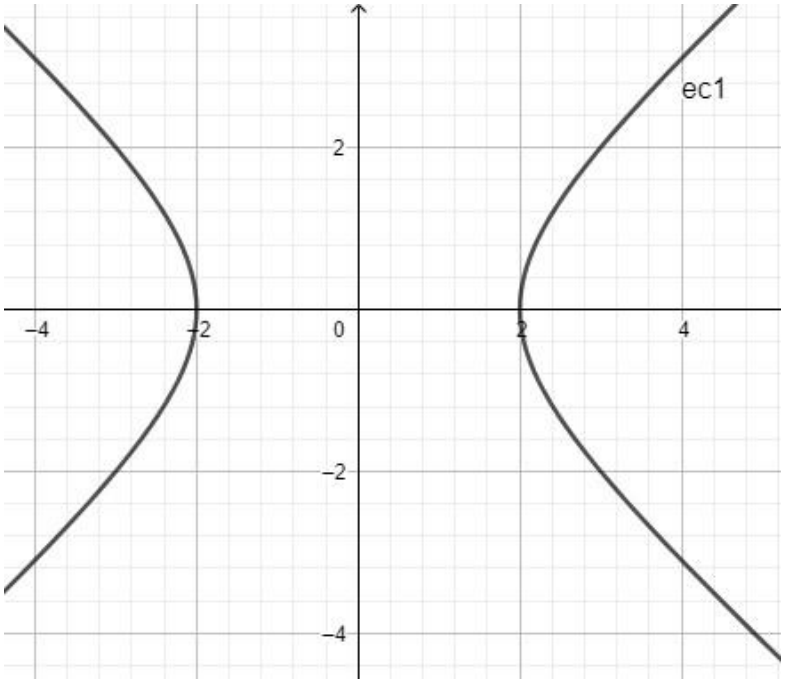
$a) \frac{x^2}{4} - \frac{y^2}{5} = 1$



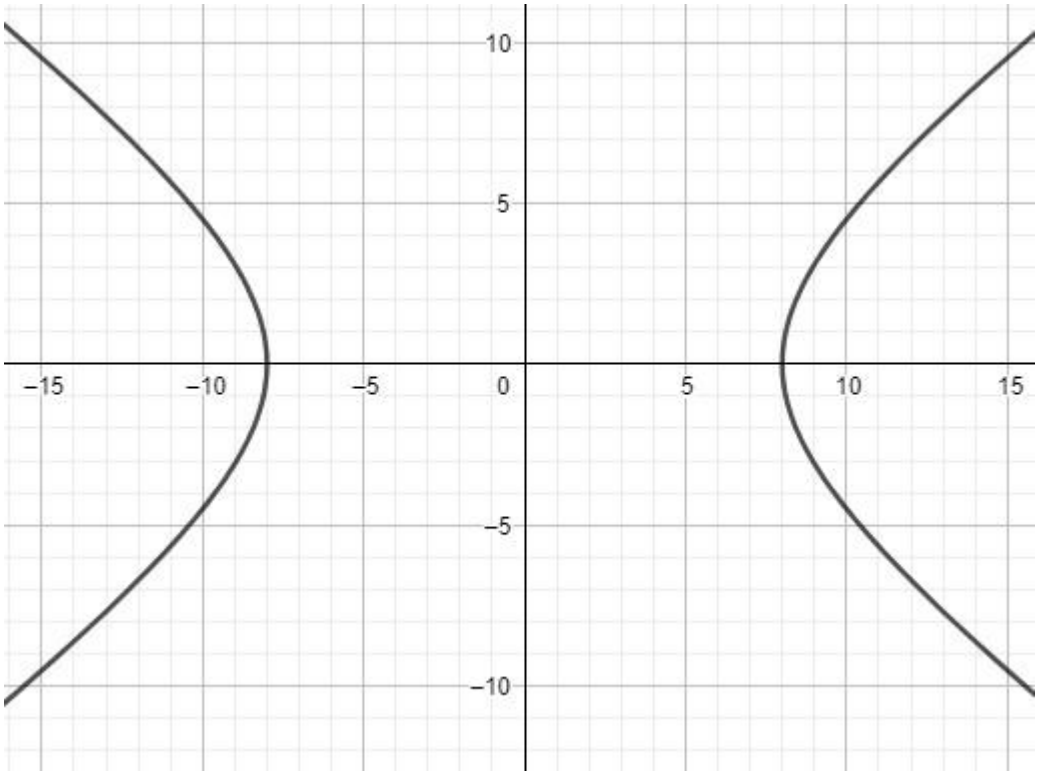
$b) -\frac{x^2}{20} + \frac{y^2}{16} = 1$



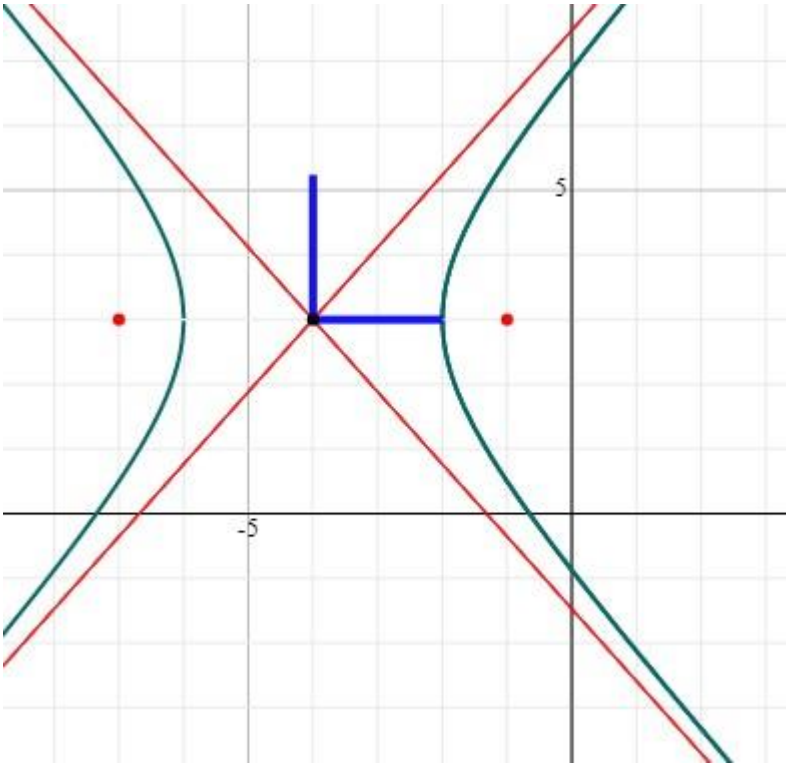
c) $\frac{x^2}{4} - \frac{y^2}{\frac{16}{5}} = 1$



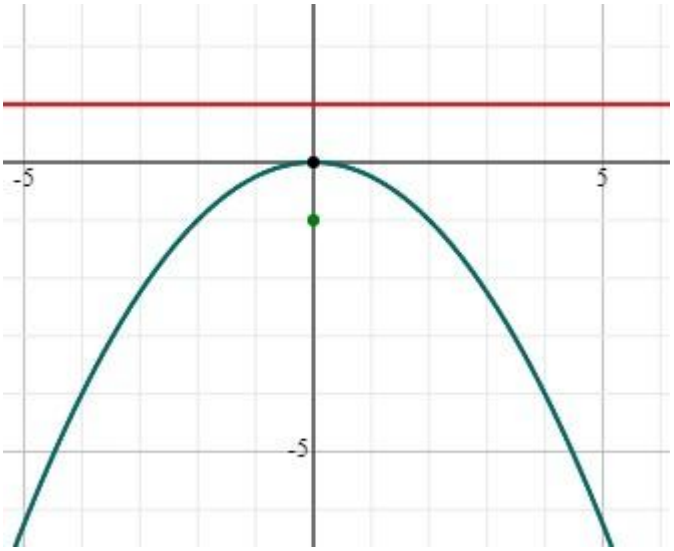
d) $\frac{(x-4)^2}{64} - \frac{(y-2)^2}{36} = 1$



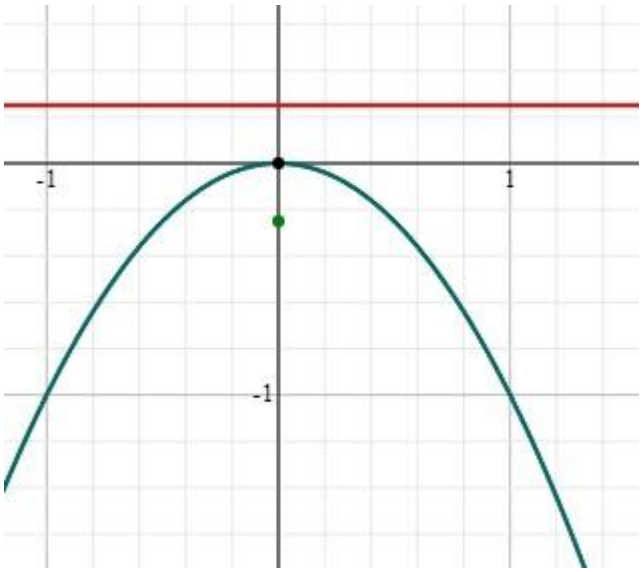
e) $\frac{(x+4)^2}{4} - \frac{(y-3)^2}{5} = 1$



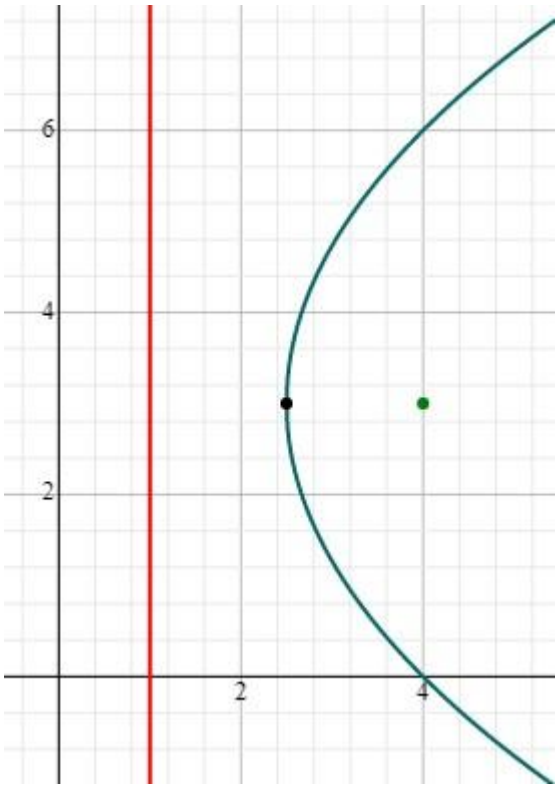
(13) $a)\ x^2 = -4y$



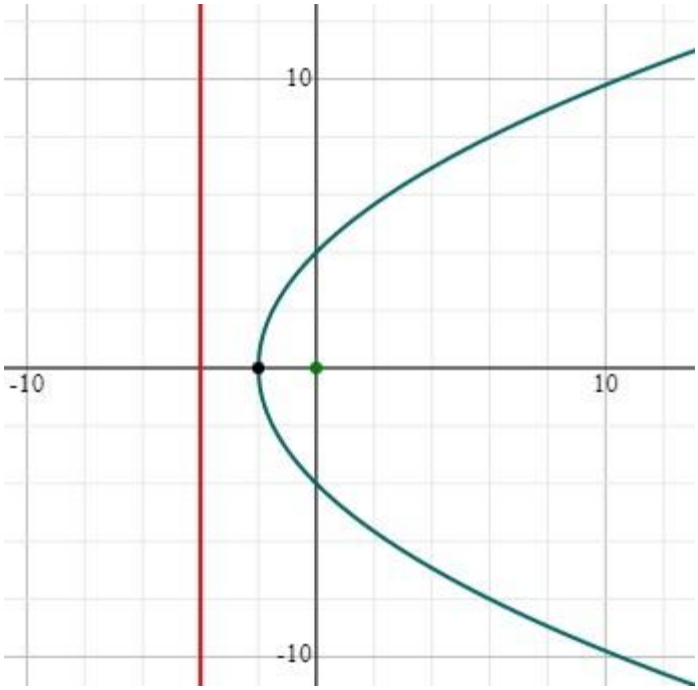
b) $x^2 = -y$



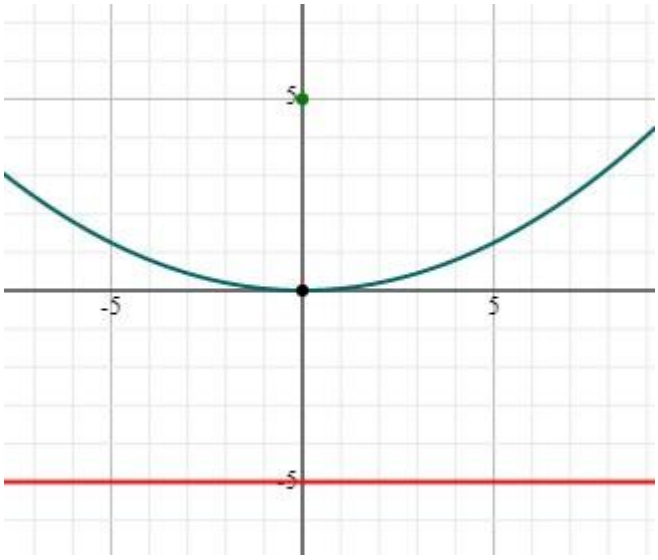
c) $(y-3)^2 = 6(x-5/2)$



d)$y^2 = 8(x+2)$



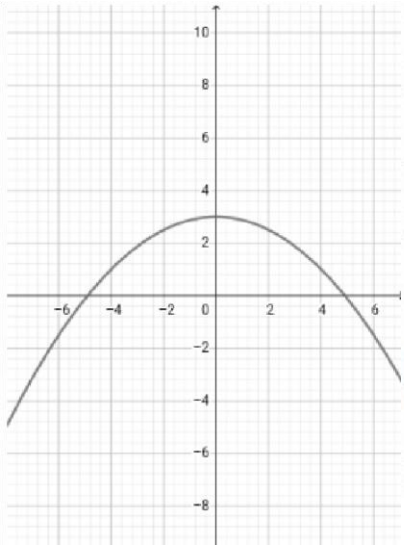
$e) \; x^2 = 20\, y$



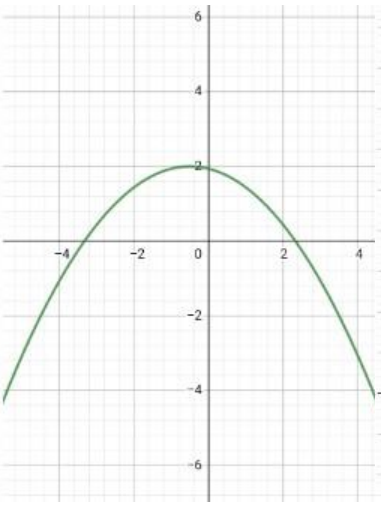
(14)

Ecuación	Vértice	Foco	Ecuación de la Directriz	Ecuación del Eje	Medida del lado recto
a)$24 - x^2 - 8y$	(0;3)	(0;1)	y=5	x=0	8
b) $4x^2+4x+16y-31=0$	(-1/2 ; 2)	(-1/2;1)	y=3	$x = -\frac{}{21}$	4
c) $4y^2-40y-x+98=0$	(-2;5)	$\left(-\frac{31}{16};5\right)$	$x=-\frac{33}{16}$	y=5	$\frac{1}{4}$
d) $Y^2-2y+2x-9=0$	$\left(1;\frac{9}{2}\right)$	$\left(\frac{1}{2};\frac{9}{2}\right)$	x=5	$y=\frac{9}{2}$	2

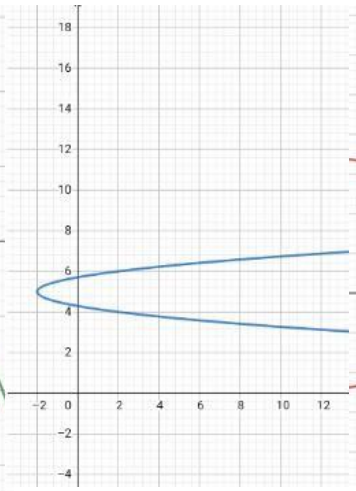
a)



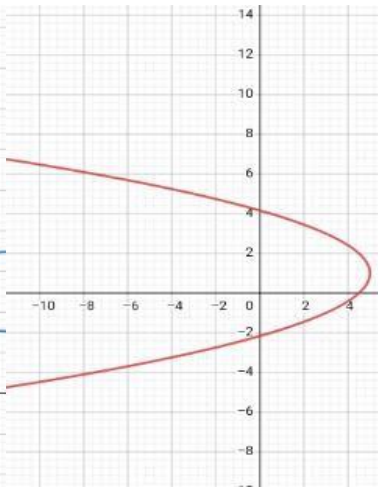
b



c



d



(15)

a) 2 rectas

b) hipérbola

c)elipse

d)circunferencia

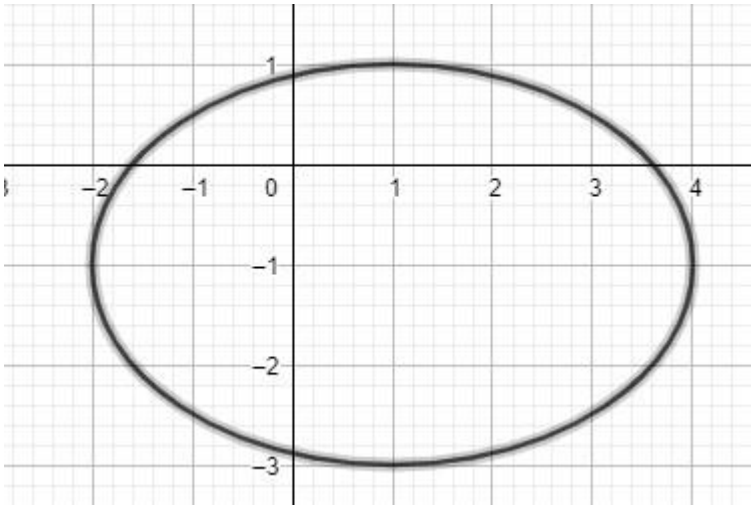
(18) Si k= 1 → Circunferencia

Si $k \neq 1$ y $k > 0$→ Elipse

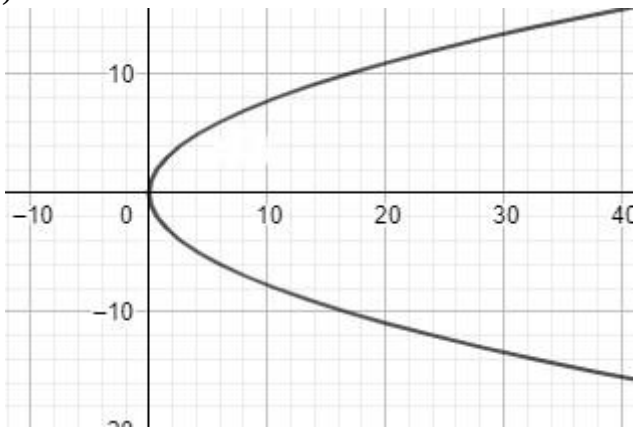
Si $k < 0$ Hiperbola

16)

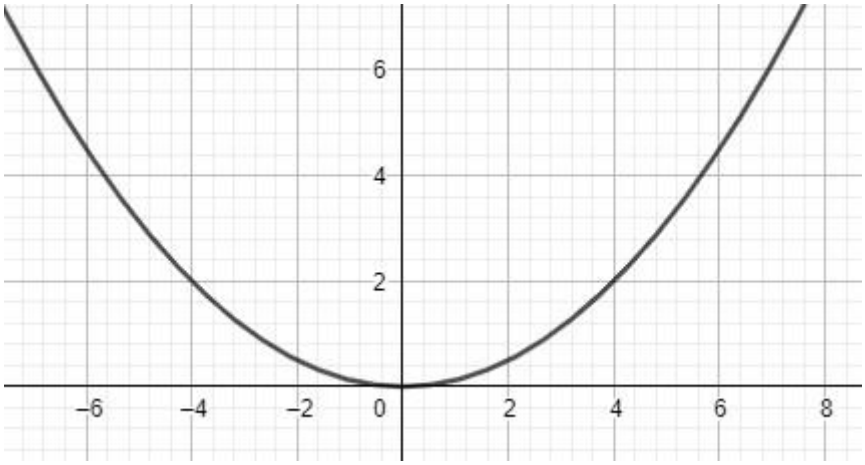
a) elipse



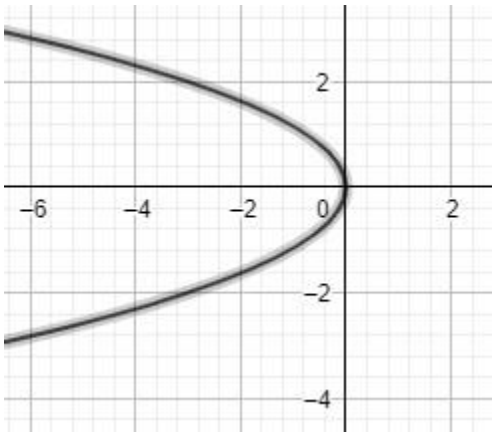
b) No existe la cónica real
c) No existe la cónica real
d) Parábola



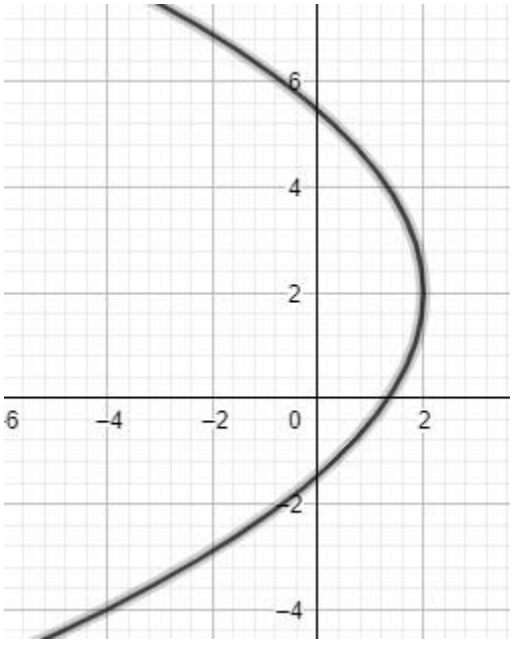
e)
Parábola



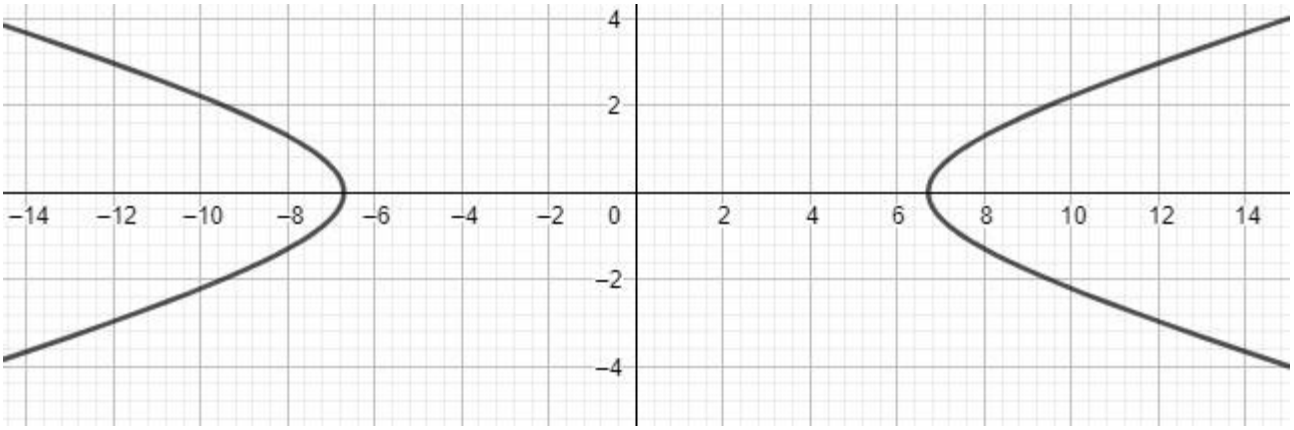
f) Parábola



g) Parábola



h) Hipérbola



i)

Hipérbola