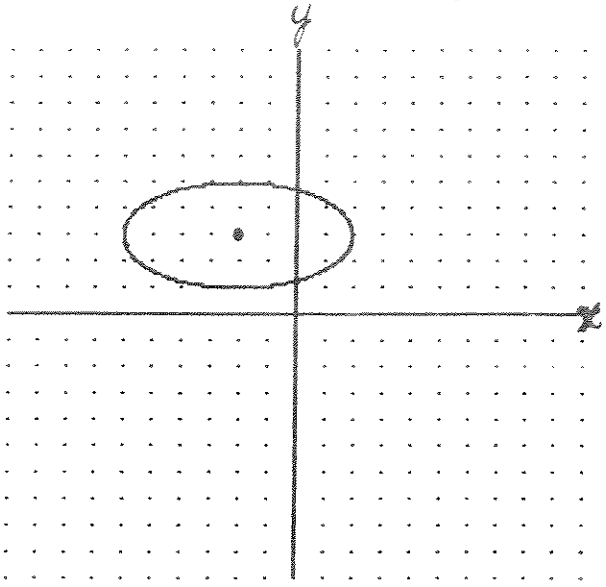
CONIC CARDS

EQUATION FOR GRAPHING

GRAPH

DESCRIPTION

A



QUATION

$$\frac{(x+2)^2}{16} + \frac{(y-3)^2}{4} = 1$$

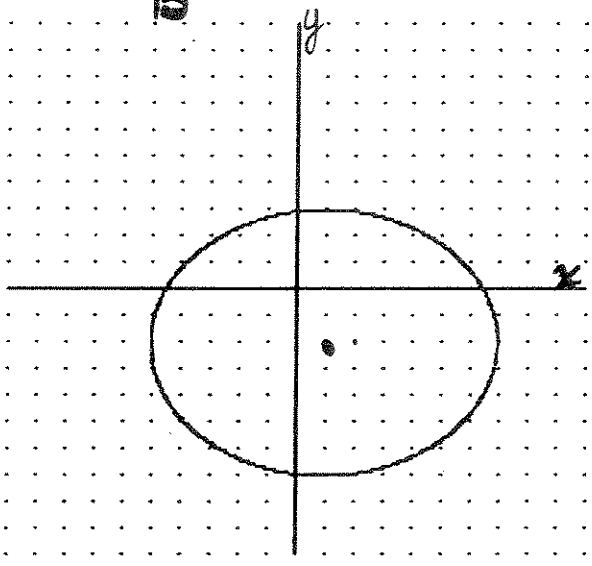
ELLIPSE

center: (−2, 3)

semi-major axis: 4

semi-minor axis: 2

B



UATION

$$\frac{(x-1)^2}{36} + \frac{(y+2)^2}{25} = 1$$

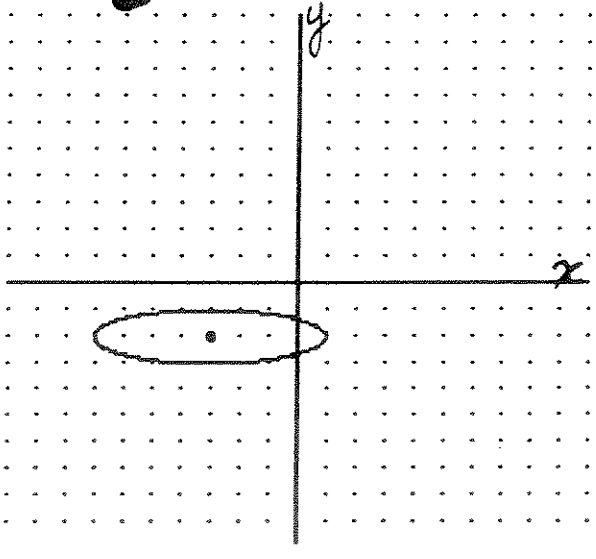
ELLIPSE

center: (1,−2)

semi-major axis: 6

semi-minor axis: 5

C



UATION

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

ELLIPSE

center: (−3,−2)

semi-major axis: 4

semi minor axis: 1

a, b, c,
eccentricity

$Ax^2+By^2+Cx+Dy+E=0$

A

$a = 4$
$b = 2$
$c = 2\sqrt{3}$
$e = .866$

$x^2+4y^2+4x-24y+24=0$

B

$a = 6$
$b = 5$
$c = \sqrt{11}$
$e = .553$

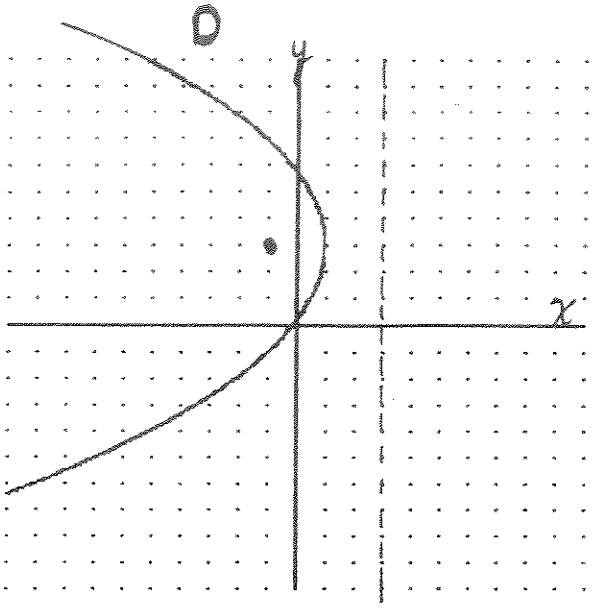
$25x^2+36y^2-50x+144y-731=0$

C

$a = 4$
$b = 1$
$c = \sqrt{15}$
$e = .968$

$x^2+16y^2+6x+64y+57=0$

D



EQUATION

$(y-3)^2 = -8(x-1)$

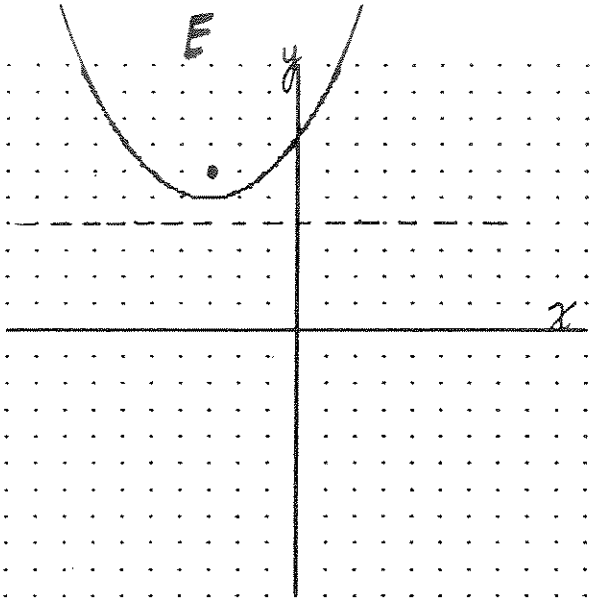
PARABOLA

Vertex: (1, 3)

Axis of symm: $y = 3$

directrix: $x = 3$

E



EQUATION

$(x+3)^2 = 4(y-5)$

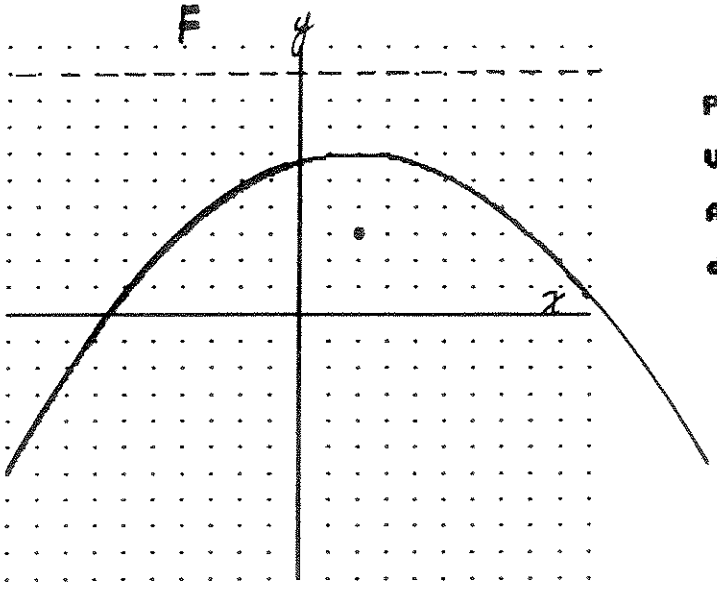
PARABOLA

Vertex: (-3, 5)

Axis of symm: $x = -3$

directrix: $y = 4$

F



UATION

$-2)^2 = -12(y-6)$

PARABOLA

Vertex: (2, 6)

Axis of symm: $x = 2$

directrix: $y = 9$

D

$a = -2$
$e = 1$

$y^2+8x-6y+1=0$

ε

$a = 1$
$e = 1$

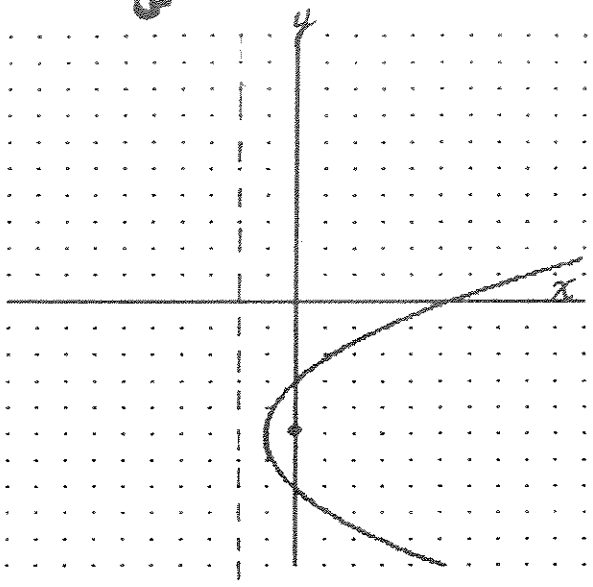
$x^2+6x-4y-29=0$

F

$a = -3$
$e = 1$

$x^2-4x+12y-68=0$

G



EQUATION

$(y+5)^2 = 4(x+1)$

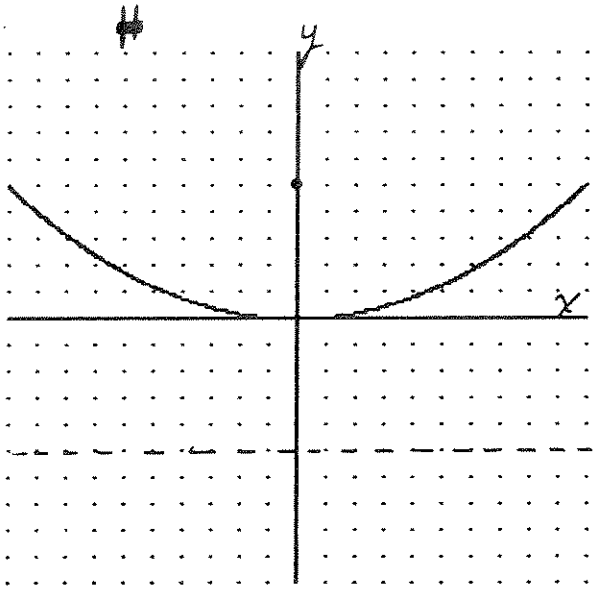
PARABOLA

Vertex: (-1,-5)

Axis of symm: y = -5

directrix: x = -2

H



EQUATION

$x^2 = 20y$

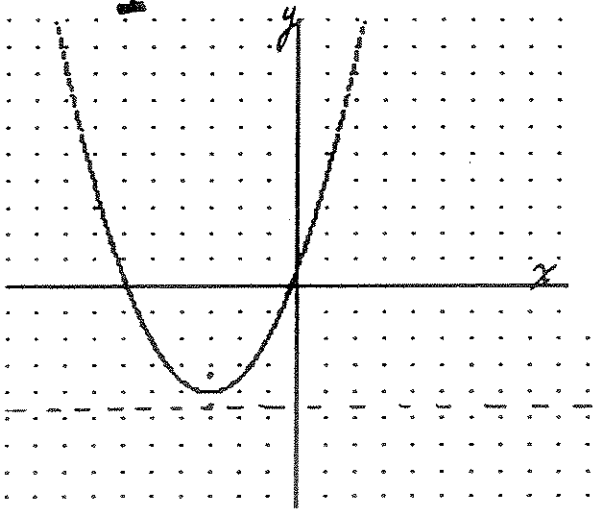
PARABOLA

Vertex: (0, 0)

Axis of symm: x = 0

directrix: y = -5

I



EQUATION

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

PARABOLA

Vertex: (-3,-4)

Axis of symm: x = -3

directrix: y = -4.5

G

a = 1
e = 1

$y^2-4x+10y+21=0$

H

a = 5
e = 1

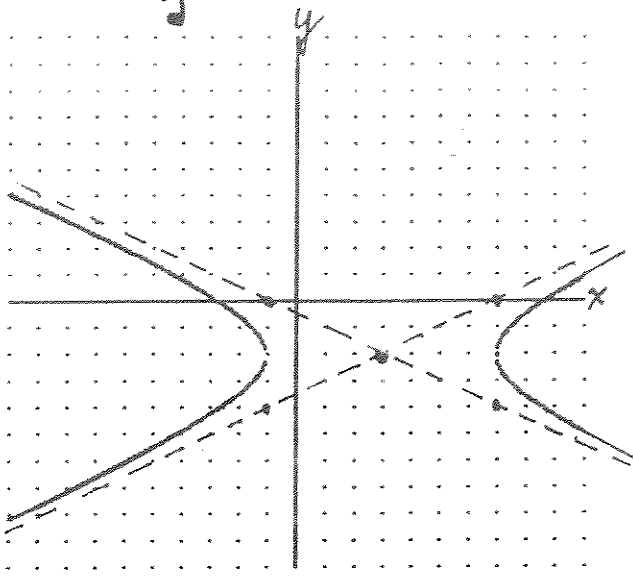
$x^2-20y=0$

I

a = .5
e = 1

$x^2+6x-2y+1=0$

J



QUATION

$$\frac{(x-3)^2}{16} - \frac{(y+2)^2}{4} = 1$$

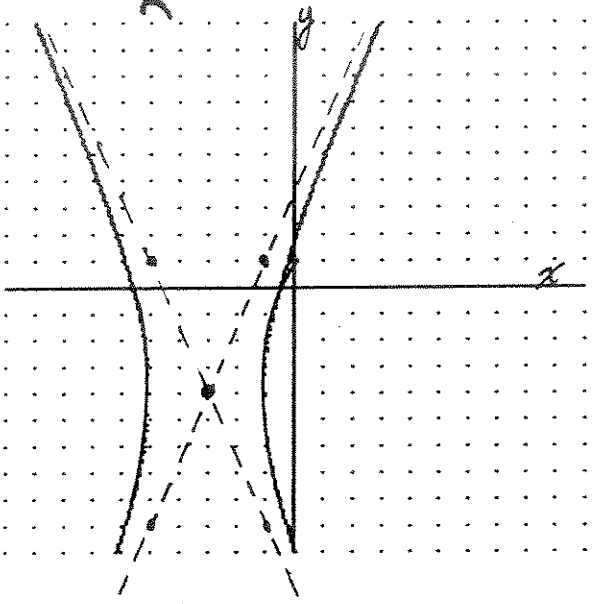
HYPERBOLA

center: (3, −2)

Vertex to center: 4

n (asymptotes): ± 1/2

K



QUATION

$$\frac{(x+3)^2}{4} - \frac{(y+4)^2}{25} = 1$$

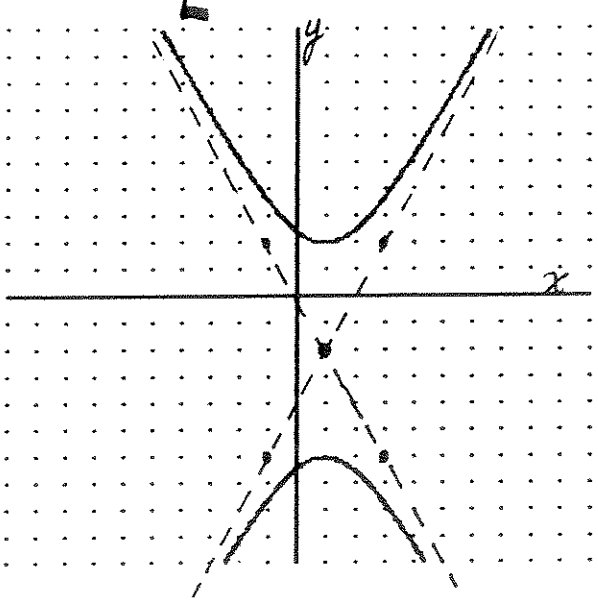
HYPERBOLA

center: (−3, −4)

Vertex to center: 2

n (asymptotes): ± 5/2

L



QUATION

$$\frac{(y+2)^2}{16} - \frac{(x-1)^2}{4} = 1$$

HYPERBOLA

center: (1, −2)

Vertex to center: 4

n (asymptotes): ± 2/1

J

$a = 4$
$b = 2$
$c = 2\sqrt{5}$
$e = 1.12$

$4x^2 - 16y^2 - 24x - 64y - 92 = 0$

K

$a = 2$
$b = 5$
$c = \sqrt{29}$
$e = 2.69$

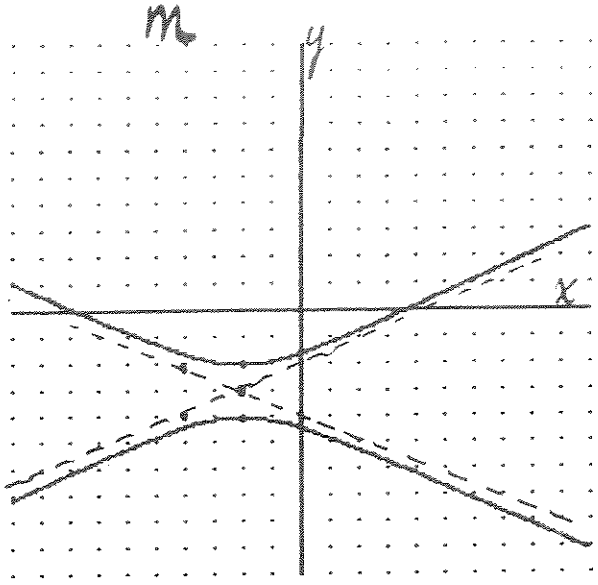
$25x^2 - 4y^2 + 150x - 32y + 61 = 0$

L

$a = 4$
$b = 2$
$c = 2\sqrt{5}$
$e = 1.12$

$-16x^2 + 4y^2 + 32x + 16y - 64 = 0$

M



UATION

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

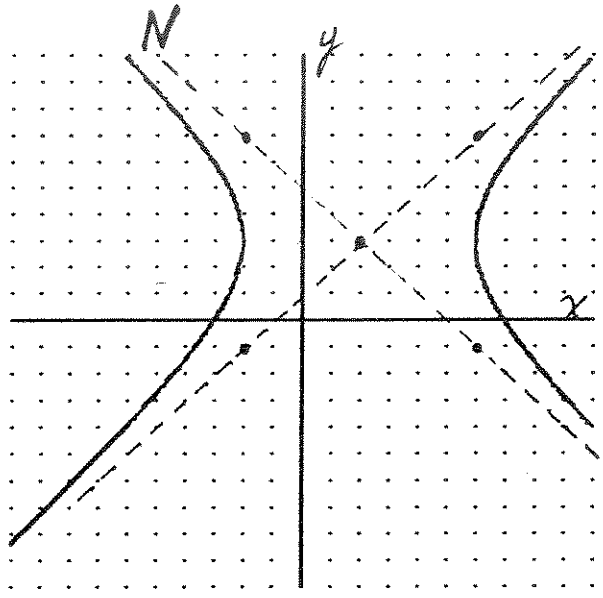
HYPERBOLA

center: (−2, −3)

Vertex to center: 1

n (asymptotes): ± 1/2

N



QUATION

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

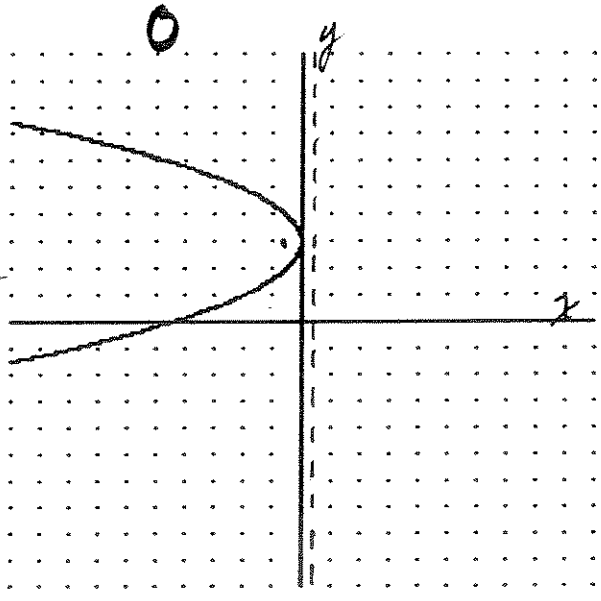
HYPERBOLA

Center: (2, 3)

Vertex to center: 4

m (asymptotes): ± 1

O



EQUATION

$(y-3)^2 = -2x$

PARABOLA

Vertex: (0, 3)

Axis of symm: y = 3

directrix: x = .5

M

$a = 1$

$b = 2$

$c = \sqrt{5}$

$e = 2.24$

$-x^2+4y^2-4x+24y+28=0$

N

$a = 4$

$b = 4$

$c = 4\sqrt{2}$

$e = 1.41$

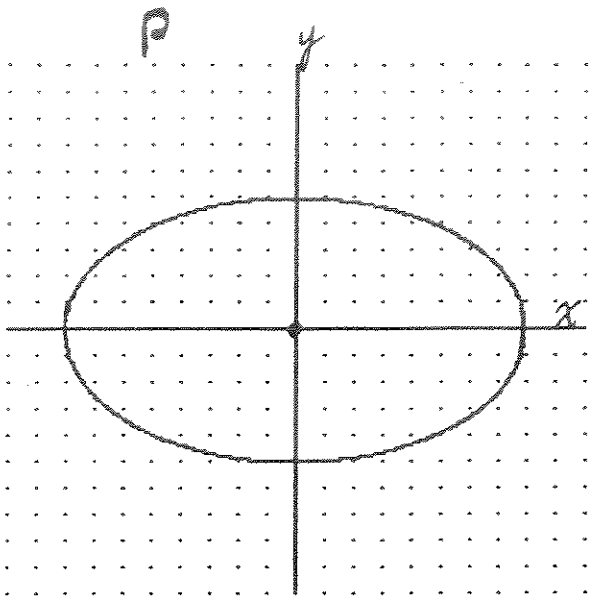
$x^2-y^2-4x+6y-21=0$

O

$a = .5$

$e = 1$

$y^2+2x-6y+9=0$



QUATION

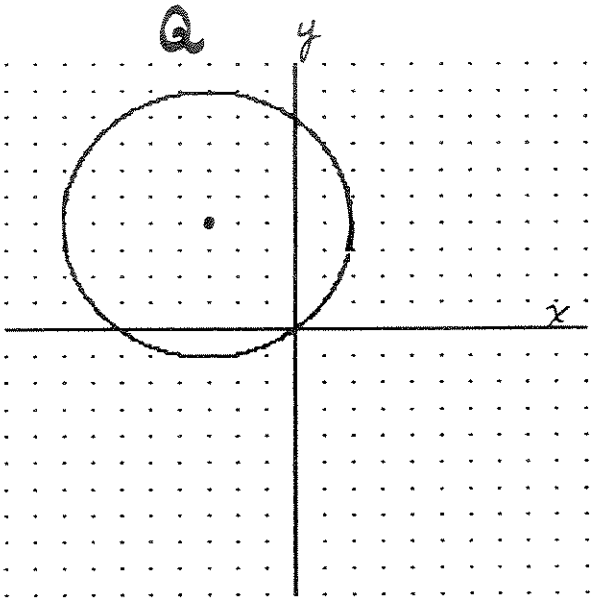
$$\frac{x^2}{64} + \frac{y^2}{25} = 1$$

ELLIPSE

center: (0,0)

semi-major axis: 8

semi-minor axis: 5



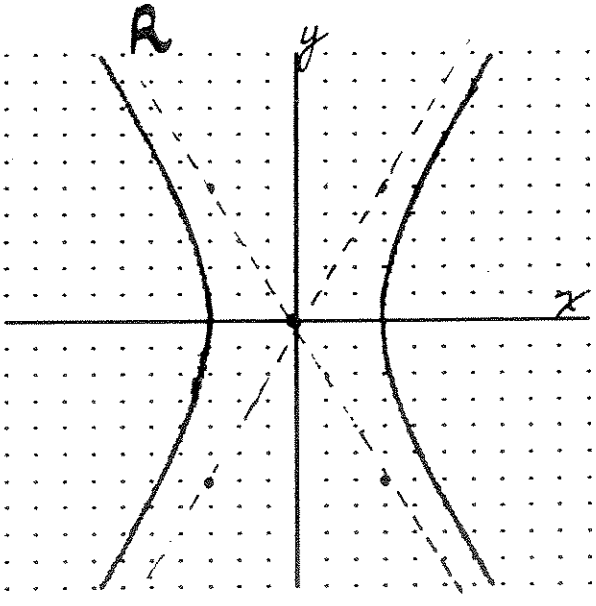
QUATION

$$\frac{(x+3)^2}{25} + \frac{(y-4)^2}{25} = 1$$

CIRCLE

center: (-3,4)

radius: 5



QUATION

$$\frac{x^2}{9} - \frac{y^2}{25} = 1$$

HYPERBOLA

center: (0,0)

Vertex to center: 3

n (asymptotes): $\pm$ 5/3

P

$a = 8$

$b = 5$

$c = \sqrt{39}$

$e = .781$

$25x^2+64y^2-1600=0$

Q

$a = 5$

$b = 5$

$c = 0$

$e = 0$

$x^2+y^2+6x-8y=0$

R

$a = 3$

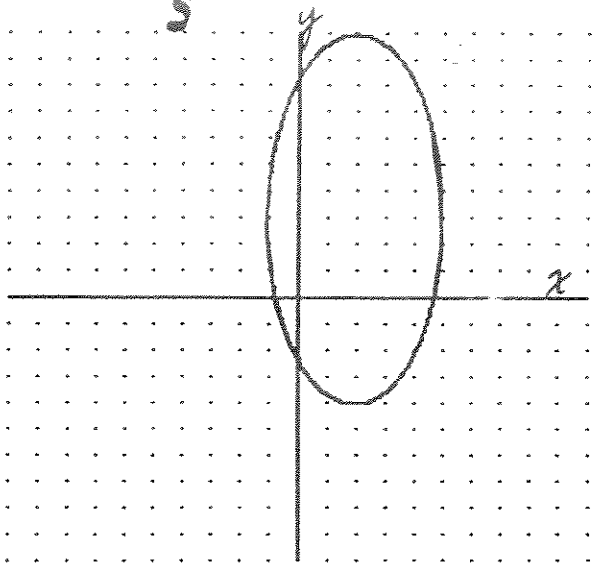
$b = 5$

$c = \sqrt{34}$

$e = 1.94$

$25x^2-9y^2-225=0$

5



QUATION

$$\frac{(x-2)^2}{9} + \frac{(y-3)^2}{49} = 1$$

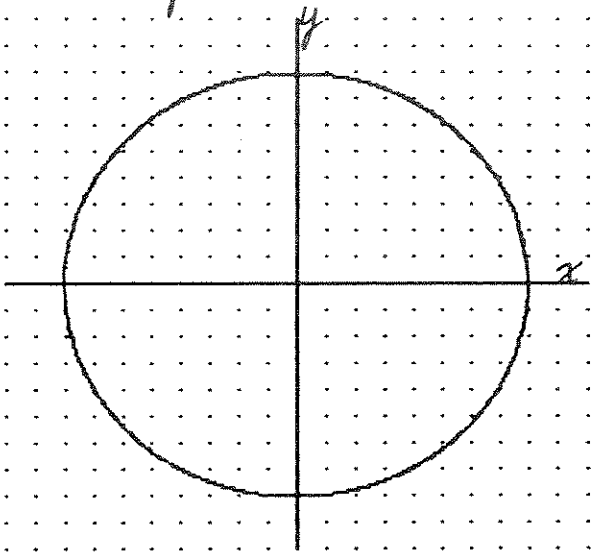
ELLIPSE

center: (2,3)

semi-major axis: 7

semi-minor axis: 3

7



UATION

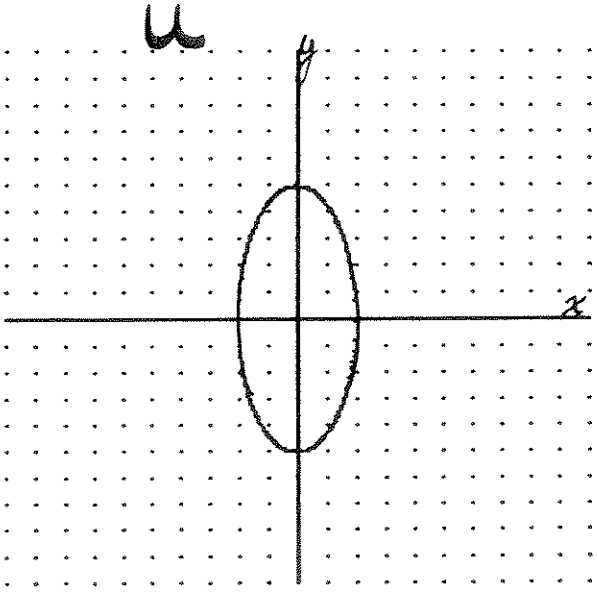
$$\frac{x^2}{64} + \frac{y^2}{64} = 1$$

CIRCLE

center: (0,0)

radius: 8

4



UATION

$$\frac{x^2}{4} + \frac{y^2}{25} = 1$$

ELLIPSE

center: (0,0)

semi-major axis: 5

semi-minor axis: 2

S

$a = 7$

$b = 3$

$c = 2\sqrt{10}$

$e = .904$

$49x^2+9y^2-196x-54y-164=0$

T

$a = 8$

$b = 8$

$c = 0$

$e = 0$

$x^2+y^2-64=0$

U

$a = 5$

$b = 2$

$c = \sqrt{21}$

$e = .917$

$25x^2+4y^2-100=0$