LP 2017-11-07

→ lab report
→ balloon problem

CIRCLES AND PARABOLAS

1 $M=(5,-3)$ $r=2$

2 $M=(-3,4)$ $r=6$

3 $M=\left(\frac{2}{3},-\frac{1}{2}\right)$ $r=\frac{1}{7}$

4 $a=-6$ $M=(-2,1)$

5 $a=-3$ $M=(4,-1)$

6 $a=\frac{3}{5}$ $M=\left(-\frac{1}{6},-\frac{1}{2}\right)$

1 $(x-5)^2+(y+3)^2=4$

$x^2+y^2-10x+6y+30=0$

2 $(x+3)^2+(y-4)^2=36$

$x^2+y^2+6x-8y-11=0$

3 $144x^2+144y^2-192x+144y+91=0$

$\rightarrow 144(x^2+y^2+y)=192x-91$

4 $y=(-6)(x+2)^2+1$

$6x^2+24x+y+23$

5 $x=(-3)(y+1)^2+4$

$3y^2+x+6y-1$

6 $X=\frac{3}{5}\left(y+\frac{1}{2}\right)-\frac{1}{6}$

$36y^2-60x+36y-1$

ELLIPSES AND HYPERBOLAS

1 $M=(2,-3)$ $a=4$ $b=6$

2 $M=(-2,-6)$ $a=5$ $b=4$

3 $M=\left(\frac{1}{4},\frac{-3}{2}\right)$ $a=-\frac{1}{7}$ $b=3$

4 $M=(3,5)$ $a=4$ $b=1$

5 $M=(6,-2)$ $a=4$ $b=2$

6 $M=\left(\frac{7}{4},-2\right)$ $a=2$ $b=\frac{2}{3}$

1 $9x^2+4y^2-36x+24y-72=0$

2 $16x^2+25y^2+64x+300y+564=0$

3 $7056x^2+16y^2-3528x+48y+333=0$

4 $-x^2+16y^2+6x-160y+407=0$

5 $-x^2+4y^2+12x+16y-4=0$

6 $-16x^2+144y^2+56x+576y+591=0$