

Conic Sections (Standard Form)

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Parabolas: graph the following

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

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

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

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

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

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

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

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

9. $x=-\frac{1}{2}(y-2)^2-5$

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

Circles: graph the following

1. $x^2+y^2=36$

2. $x^2+(y-3)^2=16$

3. $(x-2)^2+y^2=25$

4. $(x+1)^2+(y-5)^2=49$

5. $(x-3)^2+(y+2)^2=81$

6. $(x+5)^2+(y-1)^2=121$

7. $(x-\frac{3}{2})^2+(y+\frac{9}{2})^2=16$

8. $(x+1)^2+(y-1)^2=12$

9. $(x-\frac{3}{4})^2+(y+\frac{1}{6})^2=8$

10. $(x+10)^2+(y-5)^2=7$

Ellipses: graph the following

1. $\frac{x^2}{16} + \frac{y^2}{9} = 1$

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

3. $\frac{(x+1)^2}{49} + \frac{(y+2)^2}{25} = 1$

4. $\frac{(x-4)^2}{12} + \frac{(y+3)^2}{8} = 1$

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

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

7. $\frac{(x+4)^2}{25} + \frac{(y+5)^2}{36} = 1$

8. $\frac{(x-2)^2}{4} + \frac{(y+3)^2}{9} = 1$

Hyperbolas: graph the following

1. $\frac{x^2}{4} - \frac{y^2}{9} = 1$

2. $\frac{(x+1)^2}{16} - \frac{(y+2)^2}{9} = 1$

3. $\frac{(x-3)^2}{16} - \frac{(y+4)^2}{25} = 1$

4. $\frac{(x-2)^2}{36} - \frac{(y+2)^2}{16} = 1$

5. $\frac{y^2}{4} - \frac{x^2}{9} = 1$

6. $\frac{(y-1)^2}{9} - \frac{(x-2)^2}{4} = 1$

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

8. $\frac{(y-3)^2}{36} - \frac{(x-4)^2}{25} = 1$