**HOMEWORK: THE PARAMETRIC EQUATIONS OF CONIC SECTIONS**

Parametric equations and a value for the parameter $t$ are given. Find the coordinates of the point on the plane curve described by the parametric equations corresponding to the given value of $t$

1. $x=t^{2}+3, y=6-t^{3}, t=2;$
2. $x=4+2\cos(t), y=3+5\sin(t), t=\frac{π}{2};$

Use point plotting to graph the plane curve described by the given parametric equations. Use arrows to show the orientation of the curve corresponding to increasing values of $t$

1. $x=\sqrt{t}, y=t-1, 0\leq t;$
2. $x=\cos(t), y=\sin(t), 0\leq t<2π;$
3. $x=-\sin(t), y=-\cos(t), 0\leq t<2π;$
4. $x=t^{2}, y=t^{3}, -\infty <t<\infty ;$

Eliminate the parameter $t$. Then use the rectangular equation to sketch the plane curve represented by the given parametric equations. Use arrows to show the orientation of the curve corresponding to increasing values of $t$ (If an interval for $t$ is not specified, assume that $-\infty <t<\infty $ )

1. $x=3\cos(t), y=5\sin(t), 0\leq t<2π;$
2. $x=1+3\cos(t), y=-1+2\sin(t), 0\leq t\leq π;$
3. $x=2+4\cos(t), y=-1+3\sin(t), 0\leq t\leq π;$
4. $x=t^{2}+2, y=t^{2}-2;$