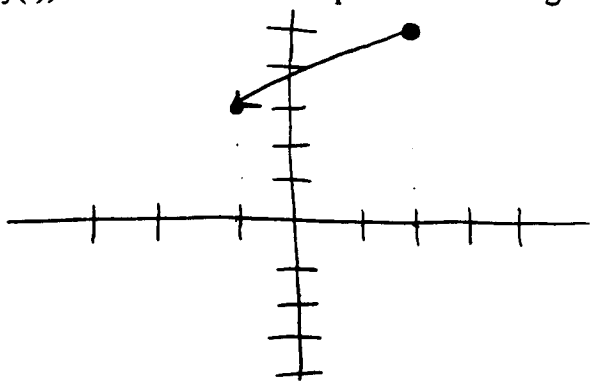
Calculus IV Quiz 4 Summer 2001 7/11/2001

1. Give parametric equations x(*t*), y(*t*), and bounds for *t* that produce a line segment from (2,5) to (-1,3).

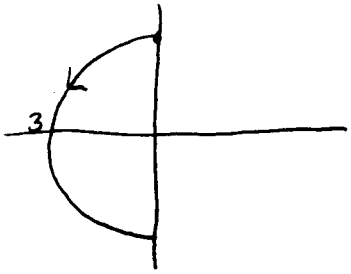
$x(t) = 2 - 3t$

$y(t) = 5 - 2t$

$0 \le t \le 1$



2. Give parametric equations x(*t*), y(*t*), and bounds for *t* that produce the left half of a circle (centered at the origin) of radius 3 traversed counterclockwise.



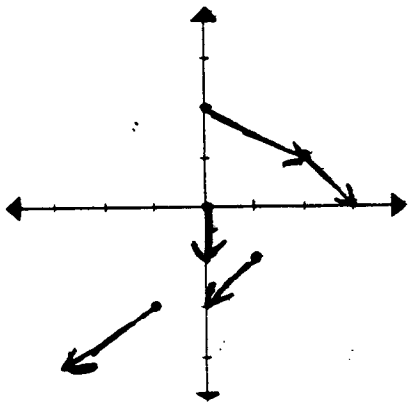
$x(t) = 3\cos t$

$y(t) = 3\sin t$

$\frac{\pi}{2} \le t \le \frac{3\pi}{2}$

Good!

3. Plot the vector field **F(x,y) =yi - 1j** for the points (0,0), (2,1), (0,2), (1,-1), and (-1,-2) indicated on the coordinate system below.



$\langle y, -1 \rangle$

at $(0,0) = \langle 0, -1 \rangle$

at $(2,1) = \langle 1, -1 \rangle$

at $(0,2) = \langle 2, -1 \rangle$

at $(+1,-1) = \langle -1, -1 \rangle$

at $(-1,-2) = \langle -2, -1 \rangle$