
'06'

```
clc
clear all
digits(4)
syms x y r t
m = -.314;
phil = (m/(2*pi))*log(sqrt(x^2+(y-5)^2));
phi2 = (m/(2*pi))*log(sqrt(x^2+(y+5)^2));
u = diff(phil+phi2,x);
v = diff(phil+phi2,y);
strmc = simplify(int(u,y));
f = simplify(-diff(strmc,x)-v);
strmc = simplify(strmc + f);
strmp = simplify(subs(strmc,{x,y},{r*cos(t),r*sin(t)}));
vpa(strmc)
vpa(strmp)
[x y] = meshgrid(-6:.4:6 , -6:.4:6);
ur = subs(u);
vr = subs(v);
streamslice(x,y,ur,vr)
fprintf('putting x = 0 or y = 0 we get constant value of strmc\nthus both the axes
```

%%%%%%%%%Output%%%%%%%%%

ans =

06

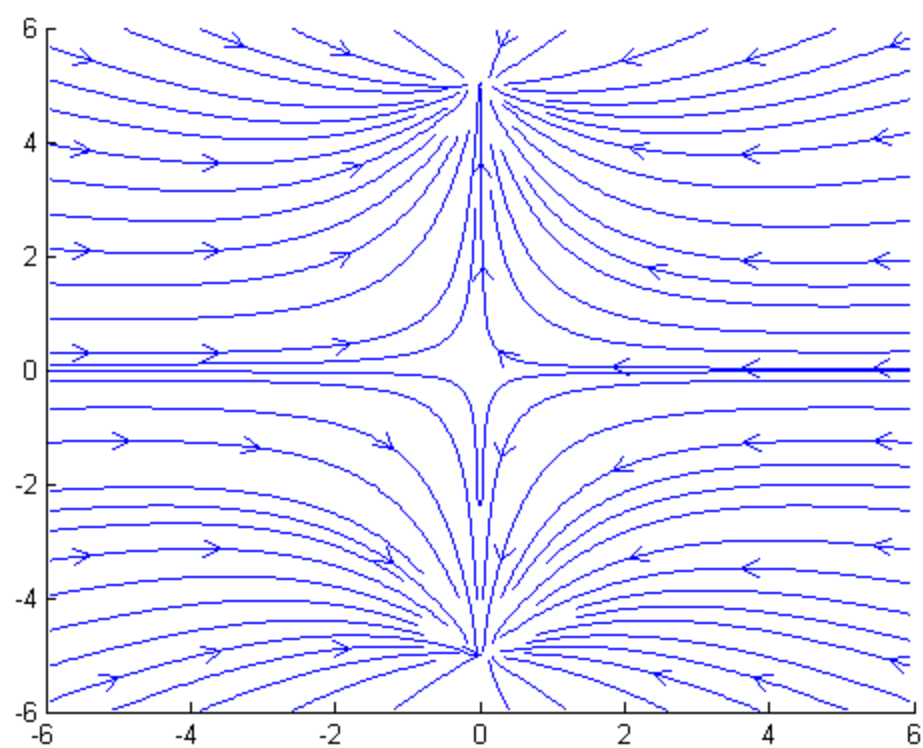
ans =

- 0.04997*atan((y - 5.0)/x) - 0.04997*atan((y + 5.0)/x)

ans =

- 0.04997*atan((r*sin(t) + 5.0)/(r*cos(t))) - 0.04997*atan((r*sin(t) - 5.0)/(r*cos(t)))

putting x = 0 or y = 0 we get constant value of strmc
thus both the axes represents streamline
x axes is the dividing streamline



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