

Math 308

Predator/prey example.

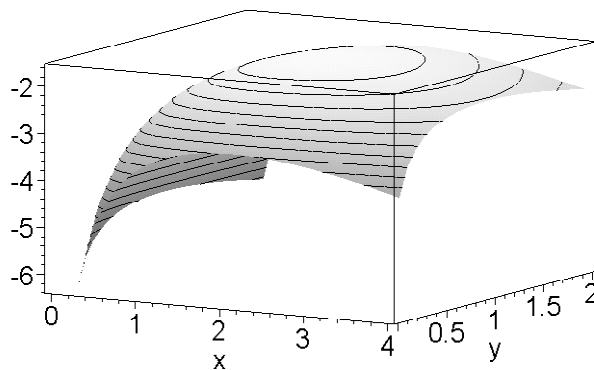
```
> with(plots):
```

```
Warning, the name changecoords has been redefined
```

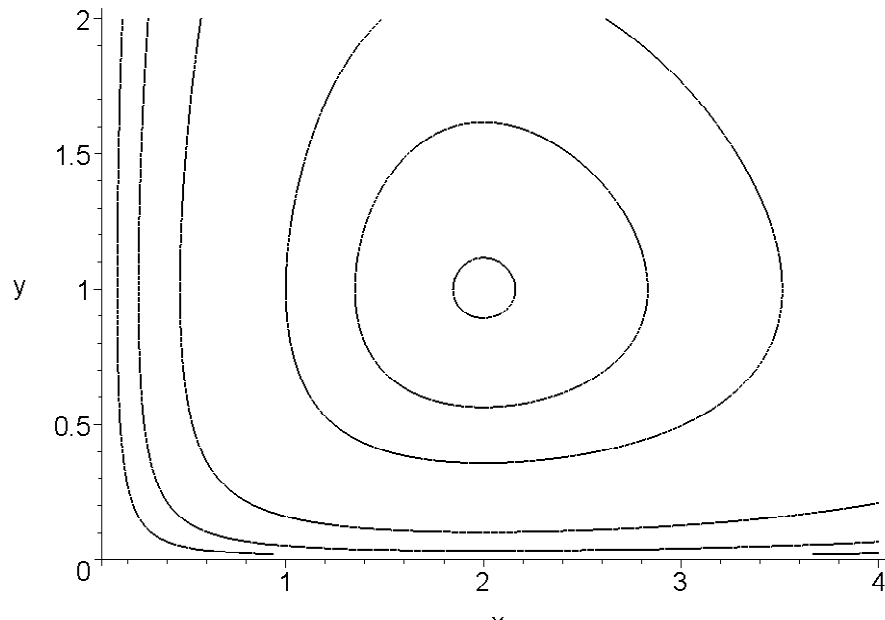
```
> H := 2*ln(x)+ln(y)-x-y;
```

$$H := \ln(y) - y + 2 \ln(x) - x$$

```
> plot3d(H,x=0..4,y=0..2,style=patchcontour,shading=zgrayscale,orientation=[-60,75],contours=21,axes=boxed);
```



```
> contourplot(H,x=0..4,y=0..2,contours=[-5,-4,-3,-2,-1.75,-1.62],grid=[101,101],color=black,thickness=2);
```



```
> evalf(subs(x=2,y=1,H));
```

```
-1.613705639
```

```
>
```