

```
> restart:with( student);
```

```
[D, Diff, Doubleint, Int, Limit, Lineint, Product, Sum, Tripleint, changevar, completesquare,  
distance, equate, integrand, intercept, intparts, leftbox, leftsum, makeproc, middlebox, middlesum,  
midpoint, powsubs, rightbox, rightsum, showtangent, simpson, slope, summand, trapezoid]
```

```
> limit((x^2-y^2)/(x^2+y^2), {x=0,y=0}); # why is it undefined  
undefined
```

```
> y:=m*x:
```

```
> limit((x^2-y^2)/(x^2+y^2), x=0);
```

$$-\frac{-1+m^2}{1+m^2}$$

```
> restart:with( student);with(Student[VectorCalculus]):with( plots):
```

```
[D, Diff, Doubleint, Int, Limit, Lineint, Product, Sum, Tripleint, changevar, completesquare,  
distance, equate, integrand, intercept, intparts, leftbox, leftsum, makeproc, middlebox, middlesum,  
midpoint, powsubs, rightbox, rightsum, showtangent, simpson, slope, summand, trapezoid]
```

```
Warning, the assigned names <,> and <|> now have a global binding
```

```
Warning, these protected names have been redefined and unprotected: *, +, -, ., D,  
Vector, diff, int, limit, series
```

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

```
>
```

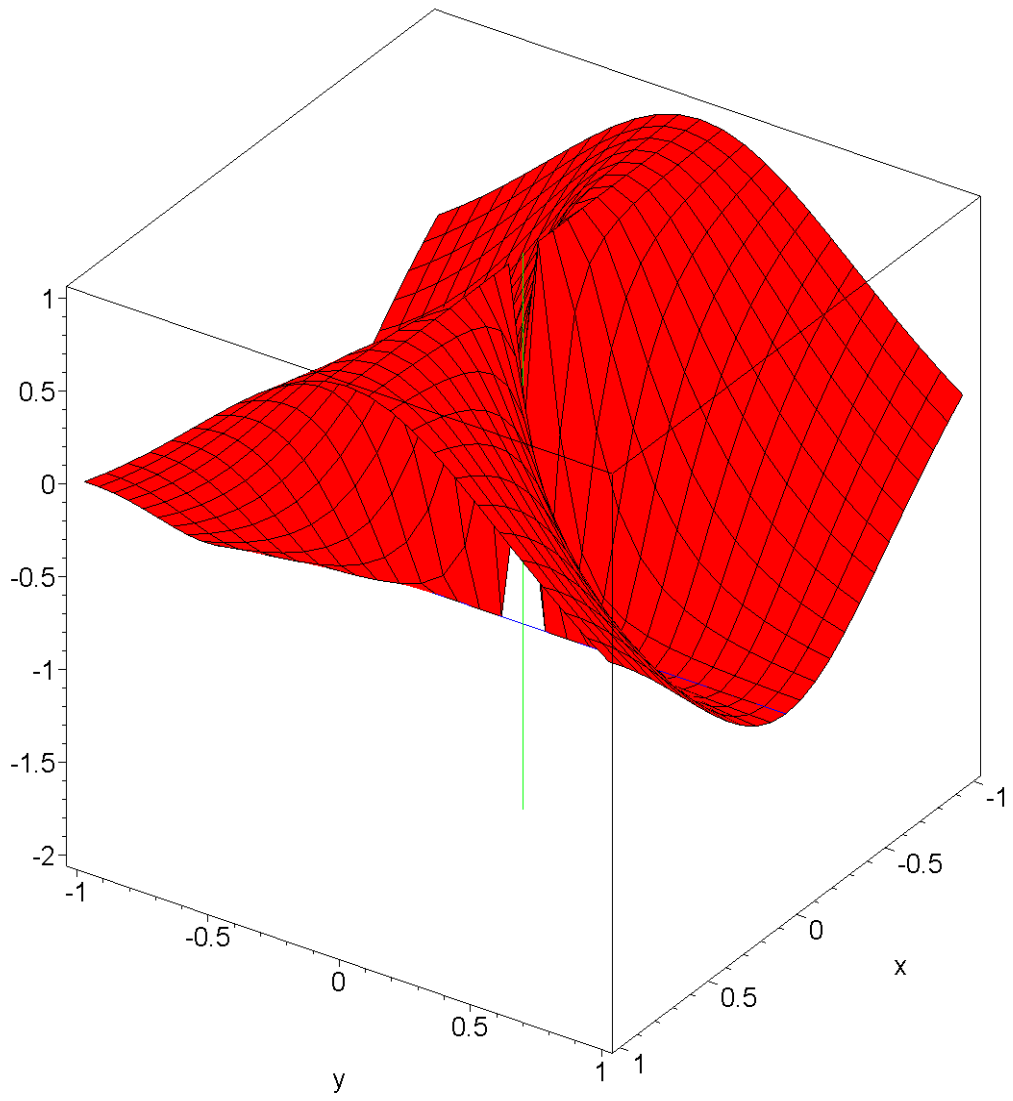
```
> limit( limit((x^2-y^2)/(x^2+y^2), x=0),y=0);
```

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```
> s1:=plot3d((x^2-y^2)/(x^2+y^2), x = -1..1,y=-1 .. 1,  
color=red,axes=boxed):
```

```
> s2:=SpaceCurve( <0,0,t>, t=-2..1,color=green,axes=boxed  
) :s3:=SpaceCurve( <0,t,-1>, t=-1..1,color= blue,axes=boxed ):
```

```
> display3d(s1,s2,s3);
```



```
[ >  
[ >
```