

```
>>syms k n t x y z r
>> limit(((2*n-3)/(3*n-7))^4,inf)
```

```
ans =
```

```
16/81
```

```
>> limit(abs(x)/sin(x),x,0)
```

```
ans =
```

```
NaN
```

```
>> limit(abs(x)/sin(x),x,0,'left')
```

```
ans =
```

```
-1
```

```
>> limit(abs(x)/sin(x),x,0,'right')
```

```
ans =
```

```
1
```

```
limit(limit((x*y)/(x^2+y^2),x,0),y,0)
```

```
ans =
```

```
0
```

```
>> limit(limit((x*y)/(x^2+y^2),y,0),x,0)
```

```
ans =
```

```
0
```

```
>> limit((x*k*x)/(x^2+(k*x)^2),x,0)
```

```
ans =
```

```
k/(k^2 + 1)
```

```
>>f=inline('cos(sqrt(x.^2+y.^2))+(x.^2+y.^2+.01).^(-1)','x','y')
```

```
f =
```

```
Inline function:
```

```
f(x,y) = cos(sqrt(x.^2+y.^2))+(x.^2+y.^2+.01).^(-1)
```

```
>> [X,Y]=meshgrid(-2*pi:.1:2*pi);
>> Z=f(X,Y);
>> surf(X,Y,Z);
>> W=(Z-4<0).*(Z-4)+4;
>> surf(X,Y,W)
>> u=inline('0*x+1','x','y')
```

u =

Inline function:  
 $u(x,y) = 0*x+1$

```
>> v=inline('x+y.^2','x','y')
```

v =

Inline function:  
 $v(x,y) = x+y.^2$

```
>> x=linspace(-2,3,11);
>> y=linspace(-1,2,11);
>> [X,Y]=meshgrid(x,y);
>> U=u(X,Y);
>> V=v(X,Y);
>> quiver(X,Y,U,V)
>> axis image
>> u=inline('1+0*x','x','y','z')
```

u =

Inline function:  
 $u(x,y,z) = 1+0*x$

```
>> v=inline('x+y.^2','x','y','z')
```

v =

Inline function:  
 $v(x,y,z) = x+y.^2$

```
>> w=inline('z','x','y','z')
```

w =

Inline function:  
 $w(x,y,z) = z$

```
>> x=linspace(-2,3,6);
```

```
>> y=linspace(-1,2,6);
>> [X,Y]=meshgrid(x,y);
>> for z=-1:4:1
Z=z+0*X;
U=u(X,Y,Z);
V=v(X,Y,Z);
W=w(X,Y,Z);
quiver3(X,Y,Z,U,V,W)
hold on
end
>>
```