

```

> restart;
> with(LinearAlgebra):
> v1:= <3 | 0 | 0>;
v1 := [ 3 0 0 ]
> v2:=<-4| 2| -1>;
v2 := [ -4 2 -1 ]
> u1:=[1,-2,3];
u1 := [1, -2, 3]
> w1:= <-1,2,-5>;
w1 := [ -1
        2
       -5 ]
> VectorAdd(v1,v2);
[ -1 2 -1 ]
> VectorAdd( v1,v2,3, -2);
[ 17 -4 2 ]
> v1;
[ 3 0 0 ]
> v2;
[ -4 2 -1 ]
> VectorNorm(v1, 2);
3
> VectorNorm(v2, 2);
√21
> VectorNorm(v2, infinity);
4
> DotProduct(v1, v2);
-12

```

```

> CrossProduct(v1, v2);
      [ 0 3 6 ]
=
> VectorAngle(v1, v2);
       $\pi - \arccos\left(\frac{4}{21}\sqrt{21}\right)$ 
=
> VectorAngle(<1|0>, <0|1>);
       $\frac{1}{2}\pi$ 
=
> restart;
> with(linalg):
> v := [2,3,4];
      v := [2, 3, 4]
=
> u := [-3,1,-5];
      u := [-3, 1, -5]
=
> matadd(u,v,2,-4);
      [ -14 -10 -26 ]
=
> norm(v,2);
       $\sqrt{29}$ 
=
> norm(u,infinity);
      5
=
> dotprod(v,u);
      -23
=
> crossprod(v,u);
      [ -19 -2 11 ]
=
> normalize([-6,-8,0]);
      [ -\frac{3}{5} -\frac{4}{5} 0 ]
=
> angle( [-6,-8,0], [1,0,0]);
       $\pi - \arccos\left(\frac{3}{50}\sqrt{100}\right)$ 

```