

```
(%i1) m: entermatrix (4,4);
```

Isthematrix1.Diagonal2.Symmetric3.Antisymmetric4.GeneralAnswer1, 2, 3or4 :
4; Row1Column1 : cos(0); Row1Column2 : (1/2)*cos(atan(2)*1); Row1Column3 :
(1/4)*cos(atan(2)*2); Row1Column4 : (1/8)*cos(atan(2)*3); Row2Column1 :
sin(0); Row2Column2 : (1/2)*sin(atan(2)*1); Row2Column3 : (1/4)*sin(atan(2)*
2); Row2Column4 : (1/8)*sin(atan(2)*3); Row3Column1 : cos(0); Row3Column2 :
(1/4)*cos(atan(4)*1); Row3Column3 : (1/16)*cos(atan(4)*2); Row3Column4 :
(1/64)*cos(atan(4)*3); Row4Column1 : sin(0); Row4Column2 : (1/4)*sin(atan(4)*
1); Row4Column3 : (1/16)*sin(atan(4)*2); Row4Column4 : (1/64)*sin(atan(4)*
3); Matrixentered.

$$(%o1) \begin{pmatrix} 1 & \frac{1}{2\sqrt{5}} & \frac{\cos(2 \operatorname{atan}(2))}{4} & \frac{\cos(3 \operatorname{atan}(2))}{8} \\ 0 & \frac{1}{\sqrt{5}} & \frac{\sin(2 \operatorname{atan}(2))}{4} & \frac{\sin(3 \operatorname{atan}(2))}{8} \\ 1 & \frac{1}{4\sqrt{17}} & \frac{\cos(2 \operatorname{atan}(4))}{16} & \frac{\cos(3 \operatorname{atan}(4))}{64} \\ 0 & \frac{1}{\sqrt{17}} & \frac{\sin(2 \operatorname{atan}(4))}{16} & \frac{\sin(3 \operatorname{atan}(4))}{64} \end{pmatrix}$$

```
(%i2) load(vect);
```

```
(%o2) /usr/share/maxima/5.34.1/share/vector/vect.mac
```

```
(%i3) load(eigen);
```

```
(%o3) /usr/share/maxima/5.34.1/share/matrix/eigen.mac
```

```
(%i4) output: [0, 1, 0, 1];
```

```
(%o4) [0, 1, 0, 1]
```

```
(%i5) numer:true;
```

```
(%o5) true
```

```
(%i6) n: invert(expand(m));
```

$$(%o6) \begin{pmatrix} -0.07585535076753463 & 0.369120565689619 & 1.075855350767534 & -0.8796533529147087 \\ -0.4452748538247779 & -1.182044744235076 & 0.4452748538247779 & 6.601892857213618 \\ -0.0641524071552378 & 6.809802372996484 & 0.0641524071552378 & -12.51354764945173 \\ -9.479293649772994 & -7.453530357259273 & 9.479293649772994 & 20.11328440884518 \end{pmatrix}$$

```
(%i7) n.output;
```

$$(%o7) \begin{pmatrix} -0.5105327872250897 \\ 5.419848112978541 \\ -5.703745276455254 \\ 12.65975405158591 \end{pmatrix}$$