

with(plots) :
with(LinearAlgebra) : with(SolveTools) : with(linalg) :

```
> RotA(s) := matrix([[cos(pi*s/100), -sin(pi*s/100), 0], [sin(pi*s/100), cos(pi*s/100), 0], [0, 0, 1]]);
RotA := s -> matrix([[cos(pi*s/100), -sin(pi*s/100), 0], [sin(pi*s/100), cos(pi*s/100), 0], [0, 0, 1]]) (1)
```

```
> V2 := matrix(3, 1, [1, 0, 1]); V1 := matrix(3, 1, [0, 1, 0]); V3 := matrix(3, 1, [1, 1, 1]);
```

$$V2 := \begin{bmatrix} 1 \\ 0 \\ 1 \end{bmatrix}$$

$$V1 := \begin{bmatrix} 0 \\ 1 \\ 0 \end{bmatrix}$$

$$V3 := \begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix} \quad (2)$$

```
>
> for s from 1 to 100 do
  P1 := evalf(evalm(RotA(s)&*V1)) : P2 := evalf(evalm(RotA(s)&*V2)) : P3 :=
  evalf(evalm(RotA(s)&*V3)) :
  B[3*s-2, 1] := P1[1, 1] : B[3*s-2, 2] := P1[2, 1] : B[3*s-2, 3] := P1[3, 1] :
  B[3*s-1, 1] := P2[1, 1] : B[3*s-1, 2] := P2[2, 1] : B[3*s-1, 3] := P2[3, 1] :
  B[3*s, 1] := P3[1, 1] : B[3*s, 2] := P3[2, 1] : B[3*s, 3] := P3[3, 1] :
od:
```

```
> C := matrix(300, 3, (i, j) -> B[i, j]) :
pointplot3d(C, axes = boxed, );
```

