

So luong he truc toa do: 8

n =

8

He truc so Chuyen vi cua he truc, 0/1 (0:Tinh tien, 1:Quay)0

C =

0 0 0 1 0

Dich chuyen theo truc x : 0

dx =

0

Dich chuyen theo truc y : 0

dy =

0

Dich chuyen theo truc z : 11

dz =

11

T =

[ 1, 0, 0, 0]

[ 0, 1, 0, 0]

[ 0, 0, 1, 11]

[ 0, 0, 0, 1]

He truc so Chuyen vi cua he truc, 0/1 (0:Tinh tien, 1:Quay)0

C =

0 0 0 1 0

Dich chuyen theo truc x : 0

dx =

0

Dich chuyen theo truc y : 0

dy =

0

Dich chuyen theo truc z : 12

dz =

12

T =

[ 1, 0, 0, 0]

[ 0, 1, 0, 0]

[ 0, 0, 1, 11 + 12]

[ 0, 0, 0, 1]

He truc so Chuyen vi cua he truc, 0/1 (0:Tinh tien, 1:Quay)0

C =

0 0 0 1 0

Dich chuyen theo truc x : 0

dx =

0

Dich chuyen theo truc y : 0

dy =

0

Dich chuyen theo truc z : 13

dz =

13

T =

[ 1, 0, 0, 0]

```
[ 0, 1, 0, 0]
[ 0, 0, 1, 11 + 12 + 13]
[ 0, 0, 0, 1]
```

He truc so Chuyen vi cua he truc, 0/1 (0:Tinh tien, 1:Quay)1

C =

```
0 0 0 1 0
```

Quay quanh tuc nao x/y/z: z

Q =

z

Gia tri quay quanh truc: t4

t =

t4

T =

```
[ cos(t4), -sin(t4), 0, 0]
[ sin(t4), cos(t4), 0, 0]
[ 0, 0, 1, 11 + 12 + 13]
[ 0, 0, 0, 1]
```

He truc so Chuyen vi cua he truc, 0/1 (0:Tinh tien, 1:Quay)0

C =

```
0 0 0 1 0
```

Dich chuyen theo truc x : 0

dx =

0

Dich chuyen theo truc y : 0

dy =

0

Dich chuyen theo truc z : 14

dz =

14

T =

```
[ cos(t4), -sin(t4), 0, 0]
[ sin(t4),  cos(t4), 0, 0]
[      0,      0, 1, 11 + 12 + 13 + 14]
[      0,      0, 0, 1]
```

He truc so Chuyen vi cua he truc, 0/1 (0:Tinh tien, 1:Quay)1

C =

```
0      0      0      1      0      1
```

Quay quanh tuc nao x/y/z: z

Q =

z

Gia tri quay quanh truc: t5

t =

t5

T =

```
[ cos(t4)*cos(t5) - sin(t4)*sin(t5), - cos(t4)*sin(t5) - cos(t5)*sin(t4), 0]
[ cos(t4)*sin(t5) + cos(t5)*sin(t4),  cos(t4)*cos(t5) - sin(t4)*sin(t5), 0]
[      0,      0, 1, 11 + 12 + 13 + 14]
[      0,      0, 0, 1]
```

He truc so Chuyen vi cua he truc, 0/1 (0:Tinh tien, 1:Quay)1

C =

```
0      0      0      1      0      1      1
```

Quay quanh trục nào x/y/z: z

Q =

z

Gia trị quay quanh trục: t6

t =

t6

T =

```
[ cos(t6)*(cos(t4)*cos(t5) - sin(t4)*sin(t5)) - sin(t6)*(cos(t4)*sin(t5) + cos(t5)*sin(t4)), - cos(t6)*(cos(t4)*sin(t5) + cos(t5)*sin(t4)) - sin(t6)*(cos(t4)*cos(t5) - sin(t4)*sin(t5)), 0, 0]
[ cos(t6)*(cos(t4)*sin(t5) + cos(t5)*sin(t4)) + sin(t6)*(cos(t4)*cos(t5) - sin(t4)*sin(t5)), cos(t6)*(cos(t4)*cos(t5) - sin(t4)*sin(t5)) - sin(t6)*(cos(t4)*sin(t5) + cos(t5)*sin(t4)), 0, 0]
[
0,
0, 1, 11 + 12 + 13 + 14]
[
0,
0, 0, 1]
```

Hệ trục số Chuyển vị của hệ trục, 0/1 (0:Tĩnh tiến, 1:Quay) 0

C =

0 0 0 1 0 1 1 0

Dịch chuyển theo trục x : 15

dx =

15

Dịch chuyển theo trục y : 0

dy =

0

Dịch chuyển theo trục z : 0

dz =

0

T =

```

[ cos(t6)*(cos(t4)*cos(t5) - sin(t4)*sin(t5)) - sin(t6)*(cos(t4)*sin(t5) + cos(t5)*sin(t4)), - cos(t6)*(cos(t4)*sin(t5) + cos(t5)*sin(t4)) - sin(t6)*(cos(t4)*cos(t5) - sin(t4)*sin(t5)), 0, 15*(cos(t6)*(cos(t4)*cos(t5) - sin(t4)*sin(t5)) - sin(t6)*(cos(t4)*sin(t5) + cos(t5)*sin(t4)))]
[ cos(t6)*(cos(t4)*sin(t5) + cos(t5)*sin(t4)) + sin(t6)*(cos(t4)*cos(t5) - sin(t4)*sin(t5)), cos(t6)*(cos(t4)*cos(t5) - sin(t4)*sin(t5)) - sin(t6)*(cos(t4)*sin(t5) + cos(t5)*sin(t4)), 0, 15*(cos(t6)*(cos(t4)*sin(t5) + cos(t5)*sin(t4)) + sin(t6)*(cos(t4)*cos(t5) - sin(t4)*sin(t5)))]
[
0,
0, 1,
+ 12 + 13 + 14]
[
0,
0, 0,
1]

```

ans =

```

[ cos(t4 + t5 + t6), -sin(t4 + t5 + t6), 0, 15*cos(t4 + t5 + t6)]
[ sin(t4 + t5 + t6), cos(t4 + t5 + t6), 0, 15*sin(t4 + t5 + t6)]
[ 0, 0, 1, 11 + 12 + 13 + 14]
[ 0, 0, 0, 1]

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