

So luong he truc toa do: 4

n =

4

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

C =

1 1 0 1 0 1 0 0

Quay quanh tuc nao x/y/z: y

Q =

y

Gia tri quay quanh truc: t1

t =

t1

T =

```
[ cos(t1), 0, sin(t1), 0]
[      0, 1,      0, 0]
[ -sin(t1), 0, cos(t1), 0]
[      0, 0,      0, 1]
```

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

C =

1 0 0 1 0 1 0 0

Dich chuyen theo truc x : 0

dx =

0

Dich chuyen theo truc y : 0

dy =

0

Dich chuyen theo truc z : -l1

dz =

-l1

T =

```
[ cos(t1), 0, sin(t1), -l1*sin(t1)]
[      0, 1,      0,      0]
[ -sin(t1), 0, cos(t1), -l1*cos(t1)]
[      0, 0,      0,      1]
```

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

C =

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

Quay quanh tuc nao x/y/z: y

Q =

y

Gia tri quay quanh truc: t3

t =

t3

T =

```
[ cos(t1)*cos(t3) - sin(t1)*sin(t3), 0, cos(t1)*sin(t3) + cos(t3)*sin(t1), -l1*sin
(t1)]
[      0, 1,      0]
[ -cos(t1)*sin(t3) - cos(t3)*sin(t1), 0, cos(t1)*cos(t3) - sin(t1)*sin(t3), -l1*cos
(t1)]
[      0, 0,      0]
1]
```

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

C =

```
1      0      1      0      0      1      0      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 =
```

```
[ cos(t1)*cos(t3) - sin(t1)*sin(t3), 0, cos(t1)*sin(t3) + cos(t3)*sin(t1), - 12
(cos(t1)*sin(t3) + cos(t3)*sin(t1)) - 11*sin(t1)]
[                                0, 1,                                0
0]
[ - cos(t1)*sin(t3) - cos(t3)*sin(t1), 0, cos(t1)*cos(t3) - sin(t1)*sin(t3), - 12
(cos(t1)*cos(t3) - sin(t1)*sin(t3)) - 11*cos(t1)]
[                                0, 0,                                0
1]
```

```
ans =
```

```
[ cos(t1 + t3), 0, sin(t1 + t3), - 12*sin(t1 + t3) - 11*sin(t1)]
[            0, 1,            0,            0]
[ -sin(t1 + t3), 0, cos(t1 + t3), - 12*cos(t1 + t3) - 11*cos(t1)]
[            0, 0,            0,            1]
```

```
>>
```