```
So luong he truc toa do: 7

n =

     7

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

C =

     0     1     0     1     0     1     0     0

Dich chuyen theo truc x : l1

dx =

l1

Dich chuyen theo truc y : l2

dy =

l2

Dich chuyen theo truc z : 0

dz =

     0


T =

[ 1, 0, 0, l1]
[ 0, 1, 0, l2]
[ 0, 0, 1,  0]
[ 0, 0, 0,  1]

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

C =

     0     1     0     1     0     1     0     0

Quay quanh tuc nao x/y/z: z

Q =

z
```

```
Gia tri quay quanh truc: t1

t =

t1


T =

[ cos(t1), -sin(t1), 0, l1]
[ sin(t1),  cos(t1), 0, l2]
[       0,        0, 1,  0]
[       0,        0, 0,  1]

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

C =

     0     1     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 : l3

dz =

l3


T =

[ cos(t1), -sin(t1), 0, l1]
[ sin(t1),  cos(t1), 0, l2]
[       0,        0, 1, l3]
[       0,        0, 0,  1]

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

```
C =

     0     1     0     1     0     1     0     0

Quay quanh tuc nao x/y/z: y

Q =

y

Gia tri quay quanh truc: t2

t =

t2


T =

[ cos(t1)*cos(t2), -sin(t1), cos(t1)*sin(t2), l1]
[ cos(t2)*sin(t1),  cos(t1), sin(t1)*sin(t2), l2]
[        -sin(t2),        0,         cos(t2), l3]
[               0,        0,               0,  1]

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

C =

     0     1     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 : -l4-l5

dz =

- l4 - l5
```

```
T =

[ cos(t1)*cos(t2), -sin(t1), cos(t1)*sin(t2), l1 - cos(t1)*sin(t2)*(l4 + l5)]
[ cos(t2)*sin(t1),  cos(t1), sin(t1)*sin(t2), l2 - sin(t1)*sin(t2)*(l4 + l5)]
[        -sin(t2),        0,         cos(t2),         l3 - cos(t2)*(l4 + l5)]
[               0,        0,               0,                              1]

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

C =

     0     1     0     1     0     1     0     0

Quay quanh tuc nao x/y/z: y

Q =

y

Gia tri quay quanh truc: t4

t =

t4


T =

[ cos(t1)*cos(t2)*cos(t4) - cos(t1)*sin(t2)*sin(t4), -sin(t1), cos(t1)*cos(t2)*sin
(t4) + cos(t1)*cos(t4)*sin(t2), l1 - cos(t1)*sin(t2)*(l4 + l5)]
[ cos(t2)*cos(t4)*sin(t1) - sin(t1)*sin(t2)*sin(t4),  cos(t1), cos(t2)*sin(t1)*sin
(t4) + cos(t4)*sin(t1)*sin(t2), l2 - sin(t1)*sin(t2)*(l4 + l5)]
[               - cos(t2)*sin(t4) - cos(t4)*sin(t2),        0,                cos
(t2)*cos(t4) - sin(t2)*sin(t4),         l3 - cos(t2)*(l4 + l5)]
[                                                 0,        0
0,                              1]

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

C =

     0     1     0     1     0     1     0     0

Dich chuyen theo truc x : l6

dx =

l6
```

```
Dich chuyen theo truc y : 0

dy =

     0

Dich chuyen theo truc z : 0

dz =

     0


T =

[ cos(t1)*cos(t2)*cos(t4) - cos(t1)*sin(t2)*sin(t4), -sin(t1), cos(t1)*cos(t2)*sin
(t4) + cos(t1)*cos(t4)*sin(t2), l1 - l6*(cos(t1)*sin(t2)*sin(t4) - cos(t1)*cos(t2)
*cos(t4)) - cos(t1)*sin(t2)*(l4 + l5)]
[ cos(t2)*cos(t4)*sin(t1) - sin(t1)*sin(t2)*sin(t4),  cos(t1), cos(t2)*sin(t1)*sin
(t4) + cos(t4)*sin(t1)*sin(t2), l2 - l6*(sin(t1)*sin(t2)*sin(t4) - cos(t2)*cos(t4)
*sin(t1)) - sin(t1)*sin(t2)*(l4 + l5)]
[               - cos(t2)*sin(t4) - cos(t4)*sin(t2),        0,                cos
(t2)*cos(t4) - sin(t2)*sin(t4),                          l3 - l6*(cos(t2)*sin(t4) -
cos(t4)*sin(t2)) - cos(t2)*(l4 + l5)]
[                                                    0,        0
0,
1]


ans =

[ cos(t2 + t4)*cos(t1), -sin(t1), sin(t2 + t4)*cos(t1), l1 + l6*cos(t2 + t4)*cos(t1)
- cos(t1)*sin(t2)*(l4 + l5)]
[ cos(t2 + t4)*sin(t1),  cos(t1), sin(t2 + t4)*sin(t1), l2 + l6*cos(t2 + t4)*sin(t1)
- sin(t1)*sin(t2)*(l4 + l5)]
[        -sin(t2 + t4),        0,         cos(t2 + t4),                l3 - cos(t2)
(l4 + l5) - l6*sin(t2 + t4)]
[                    0,        0,                    0
1]

>>
```