
```
% Chapter 2 Exercise 16
clc;
clear all
close all
```

Is the inverse of a homogeneous transformation matrix equal to its transpose?

```
T = transl(2,2,1)*trotz(pi/4)*troty(-pi/4)*trotx(pi/6);
```

```
T_inv = inv(T)
T_trans = T'
```

```
if isequal(T_inv, T_trans)
    disp 'yes, T_inv == T_trans'
else
    disp 'no, T_inv != T_trans'
end
```

```
T_inv =
```

| | | | |
|---------|---------|--------|---------|
| 0.5000 | 0.5000 | 0.7071 | -2.7071 |
| -0.8624 | 0.3624 | 0.3536 | 0.6464 |
| -0.0795 | -0.7866 | 0.6124 | 1.1197 |
| 0 | 0 | 0 | 1.0000 |

```
T_trans =
```

| | | | |
|---------|---------|--------|--------|
| 0.5000 | 0.5000 | 0.7071 | 0 |
| -0.8624 | 0.3624 | 0.3536 | 0 |
| -0.0795 | -0.7866 | 0.6124 | 0 |
| 2.0000 | 2.0000 | 1.0000 | 1.0000 |

```
no, T_inv != T_trans
```

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