Contents


```
R = [0 -0.866 0.6;
    0.5 nan 0.75;
    -0.866 0.25 0.433]
```

```
R =

         0   -0.8660    0.6000
    0.5000       NaN    0.7500
   -0.8660    0.2500    0.4330
```

Pitch

```
phi = atan2(-R(3,1),sqrt(R(3,2)^2+R(3,3)^2))
```

```
phi =

    1.0472
```

Roll

```
theta = atan2(R(3,2)/cos(phi),R(3,3)/cos(phi))
```

```
theta =

    0.5236
```

Yaw

```
psi = atan2(R(2,1)/cos(phi), R(1,1)/cos(phi))
```

```
psi =
```

```
    1.5708
```

X

```
x = cos(psi)*cos(theta)+sin(psi)*sin(phi)*sin(theta)
```

```
x =

    0.4330
```

checking the results

```
R(2,2) = x
```

```
R =

         0   -0.8660    0.6000
    0.5000    0.4330    0.7500
   -0.8660    0.2500    0.4330
```

Roll-Pitch-Yaw

```
tr2rpy(r2t(R))
```

```
ans =

    0.5236    1.0472    1.5708
```

in degrees

```
tr2rpy(r2t(R), 'deg')
```

```
ans =

   30.0007   59.9993   90.0000
```

Published with MATLAB® R2021b