HW2.2. Find the Roll-Pitch-Yaw angles that would have produced a rotation matrix

Suppose the orientation of frame 1 with respect to frame 0 is

$$R_{01} = \begin{bmatrix} 0.46 & -0.37 & -0.80 \\ -0.25 & -0.93 & 0.29 \\ -0.85 & 0.06 & -0.52 \end{bmatrix}$$

Python

```
import numpy as np

R_1in0 = np.array([[0.464403001003,
-0.371774676978, -0.803811820153],
[-0.246123824065, -0.926046980526,
0.286111959008], [-0.850736690103,
0.064965986618, -0.521561602014]])
```

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Find a set of angles

$$\text{roll} \in (-\pi, \pi]$$
$$\text{pitch} \in (-\frac{\pi}{2}, \frac{\pi}{2}]$$
$$\text{yaw} \in (-\pi, \pi]$$

that would produce this orientation.

$\text{roll} =$	number (rtol=0.01, atol=1e-08)	?
$\text{pitch} =$	number (rtol=0.01, atol=1e-08)	?
$\text{yaw} =$	number (rtol=0.01, atol=1e-08)	?

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Homework 2

Assessment overview

Total points: 20/20

Score: 100%

Question

Value: 1

History: 1

Awarded points: 1/1

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