```
my_R = [0.5363 -0.3020 0.7881;0.6830 0.7039 -0.1951;-0.4958 0.6429 0.5838]
```

```
my_R = 3×3
    0.5363   -0.3020    0.7881
    0.6830    0.7039   -0.1951
   -0.4958    0.6429    0.5838
```

```
syms a a alpha; syms b a beta; syms c a gamma;
R1 = [cos(alpha) -sin(alpha) 0; sin(alpha) cos(alpha) 0; 0 0 1];
R2 = [cos(beta) 0 sin(beta); 0 1 0; -sin(beta) 0 cos(beta)];
R3 = [1 0 0; 0 cos(gamma) -sin(gamma); 0 sin(gamma) cos(gamma)];
my_R_with_angles = R1*R2*R3
```

```
my_R_with_angles =
```

$$\begin{pmatrix} \cos(\alpha)\cos(\beta) & \cos(\alpha)\sin(\beta)\sin(\gamma) - \cos(\gamma)\sin(\alpha) & \sin(\alpha)\sin(\gamma) + \cos(\alpha)\cos(\gamma)\sin(\beta) \\ \cos(\beta)\sin(\alpha) & \cos(\alpha)\cos(\gamma) + \sin(\alpha)\sin(\beta)\sin(\gamma) & \cos(\gamma)\sin(\alpha)\sin(\beta) - \cos(\alpha)\sin(\gamma) \\ -\sin(\beta) & \cos(\beta)\sin(\gamma) & \cos(\beta)\cos(\gamma) \end{pmatrix}$$

```
B = solve(-sin(beta) == my_R(3,1));
b1 = double(B(1))
```

```
b1 = 0.5188
```

```
b1_A = solve(cos(alpha)*cos(b1) == my_R(1,1));
b1_a1 = double(b1_A(1))
```

```
b1_a1 = 0.9052
```

```
b1_G = solve(cos(b1)*sin(gamma) == my_R(3,2));
b1_g1 = double(b1_G(1))
```

```
b1_g1 = 0.8335
```