3 Punkte: Trägheitstensoren und deren Eigenwerte

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```
In[•]:= Ep = {2, -2, -2};

In[•]:= Fp = {-2, -1, 2};

In[•]:= Gp = {-2, 2, -2};

In[•]:= Hp = {2, 1, 2};

In[•]:= JMatrix[P_] := P.P IdentityMatrix[3] - ({#} & /@ P).{P}

In[•]:= J1 = JMatrix[Ep]
Out[•]=
{{8, 4, 4}, {4, 8, -4}, {4, -4, 8}}

In[•]:= J2 = JMatrix[Fp]
Out[•]=
{{5, -2, 4}, {-2, 8, 2}, {4, 2, 5}}

In[•]:= J3 = JMatrix[Gp]
Out[•]=
{{8, 4, -4}, {4, 8, 4}, {-4, 4, 8}}

In[•]:= J4 = JMatrix[Hp]
Out[•]=
{{5, -2, -4}, {-2, 8, -2}, {-4, -2, 5}}

In[•]:= J = J1 + J2 + J3 + J4
Out[•]=
{{26, 4, 0}, {4, 32, 0}, {0, 0, 26}}

In[•]:= Eigensystem[J]
Out[•]=
{{34, 26, 24}, {{1, 2, 0}, {0, 0, 1}, {-2, 1, 0}}}

In[•]:= #/Norm[#] & /@ Eigensystem[J][[2]] // N
Out[•]=
{{0.447214, 0.894427, 0.}, {0., 0., 1.}, {-0.894427, 0.447214, 0.}}
```