In[1]:= `ClearAll["Global`*"]`

```
x = Sin[θ[t]] Cos[ϕ[t]];
y = Sin[θ[t]] Sin[ϕ[t]];
z = Cos[θ[t]];
FullSimplify[D[x, t]^2 + D[y, t]^2 + D[z, t]^2]
```

Out[5]= $\theta'[t]^2 + Sin[\theta[t]]^2 \phi'[t]^2$