FOR ALL PROBLEMS: Think about the answers you obtain. Do they seem reasonable? If yes, then you have nothing more to do. If not, try to find any mistakes you may have made; if you can’t find anything wrong, comment on why you think your answer is unreasonable.

- 10.13
- 10.18
- Extra problem 1. Consider a general vector having the direction angles $\alpha$, $\beta$, and $\gamma$, as described in lecture.

\[
\cos^2 \alpha + \cos^2 \beta + \cos^2 \gamma = 1
\]