

TL 7-14 (angular momentum vector diagrams)

Take $l=1$

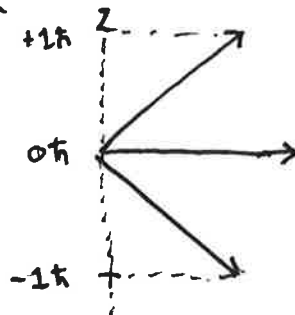
c) what are possible values of L ? I mean, what is L ?

$$L = \hbar \sqrt{l(l+1)}, \text{ so } \boxed{L = \sqrt{2}\hbar}$$

b) what, now are the possible values of m ?

$$m = +1, 0, -1$$

c) vector diagram



d) for $l=3$

$$L = \sqrt{12}\hbar, \quad m = +3, +2, +1, 0, -1, -2, -3$$

