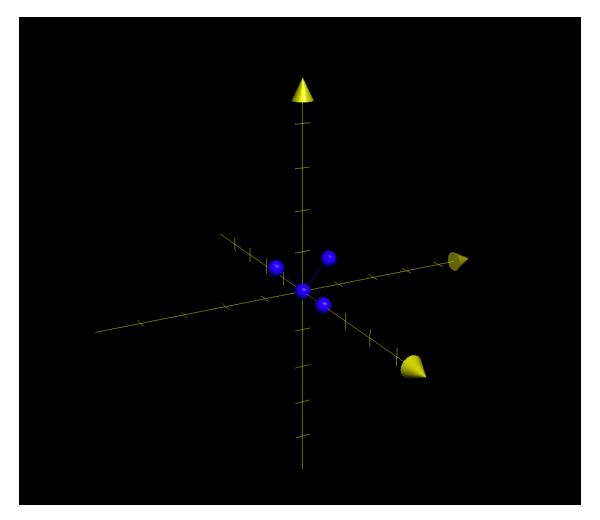
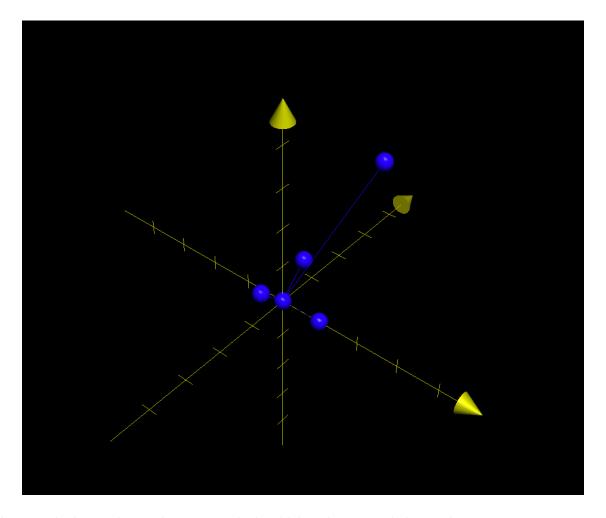
uugh I spent an hour trying to get  $\LaTeX$  to position the image on the first page. The basis:



The vector:

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Change color in Grapher: Select an entry in the sidebar, then use Window > Show Inspector The working out:

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Axler 6.13 ex 3 and one Me
orthonormality (1,0,0), (1,1,1), (1,1,2)
$e_1 = (1, 0, 0), e_2 = normalize((1, 1, 1) - (1, 0, 0))$ = normalize((0, 1, 1))
= (0, 1/2, 1/2)
$e_3 = normalize((1,1,2)-(1,0,0)-\frac{3}{\sqrt{2}}(0,\frac{1}{\sqrt{2}},\sqrt{2}))$
= normalize (0,1,2)-(0, \(\frac{2}{2}\), \(\frac{2}{2}\))
= normalize $(0, \frac{1}{2}, \frac{1}{2})$
=(0, 元, 症)
(1,0,0), (0, 症, 症), (0, 症, 症)
0+====================================
V=(1,2,3)
= ((1,2,3),(1,0,0)) e,+((1,2,3),(0, 元, 症)) e2+((1,33),(0, 元, 症))
$= 1e, + \frac{5}{5}e_2 + \frac{1}{5}e_3$
$= (1,0,0) + (0,\frac{5}{2},\frac{5}{2}) + (0,\frac{1}{2},\frac{1}{2})$
=(1, 4, 4)

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