Homework 1.4

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1. $\overline{v}_{\parallel} = (-5,3) - (1,2) = \langle -6,1\rangle \Rightarrow \mathbb{L}(t) = (-5,3) + t\langle -6,1\rangle \Rightarrow \frac{x+5}{-6} = y - 3$
2. $\overline{v}_{\parallel} = (0,1) - (1,0) = \langle -1,1\rangle \Rightarrow \mathbb{L}(t) = (0,1) + t\langle -1,1\rangle \Rightarrow -x = y - 1$
3. $\overline{v}_{\parallel} = (1,2,3) - (3,2,1) = \langle -2,0,2\rangle \Rightarrow \mathbb{L}(t) = (1,2,3) + t\langle -2,0,2\rangle \Rightarrow -\frac{x-1}{2} = \frac{z-3}{2}$
4. $\overline{v}_{\parallel} = (1,0,0) - (0,-1,-2) = \langle 1,1,2\rangle \Rightarrow (1,0,0) + t\langle 1,1,2\rangle \Rightarrow$ Symmetric equations are not possible
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