

Show all work. 5 points each.

1) Determine if the points $A(5, 1, 3)$, $B(7, 9, -1)$, $C(1 - 15, 11)$ are in a straight line.

2) Let $\mathbf{a} = \langle -4, 3 \rangle$ and $\mathbf{b} = \langle 6, 2 \rangle$:

i) find $|\mathbf{a}|$,

ii) find $\mathbf{a} + \mathbf{b}$ and illustrate.