MATH 261 Quiz 1 Name: .
Student number:

Show all work. 5 points each.

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

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

ii)find $\mathbf{a} + \mathbf{b}$ and draw the vectors $\mathbf{a} + \mathbf{b}$, $\mathbf{a}$ and $\mathbf{b}$

2) Find $proj_{\mathbf{a}}\mathbf{b}$ if $\mathbf{a} = \langle 3, -4 \rangle$ and $\mathbf{b} = \langle -2, 11 \rangle$. Draw the vectors $proj_{\mathbf{a}}\mathbf{b}$, $\mathbf{a}$ and $\mathbf{b}$
(2 pts Extra credit: find $orth_{\mathbf{a}}\mathbf{b}$ and draw the vector with the others