MATH 415-515 Quiz 1 Name:
Student number:

Show all work. 10 points each.

1. Recall that if $a = A + Bi$ is a nonzero complex number and b is any complex number then , $0 = Re(az + b)$ is the straight line $Ax - By + Re(b) = 0$. Show that two lines $0 = Re(az + b)$ and $0 = Re(cz + d)$ are perpendicular iff $Re(a\overline{c}) = 0$

2. Write $1 - i$ in polar form.

Use the above to find all solutions of $(z + 1)^4 = 1 - i$