Slides for tomorrow's pre-lecture video are available now on site

Video released by 1 hour after disc.

HW2, 3 released by tomorrow

Quiz graded by next lecture

Q5: Domain of $F(x,y) = \frac{1+x^2+y^2}{1-x^2-y^2}$ & where it is continuous

Domain is just where F is defined.

$1+x^2+y^2$ & $1-x^2-y^2$ always defined,

So only problem is if $1-x^2-y^2=0$

$\Rightarrow$ only if $x^2+y^2=1$.

Domain: all points (x,y) with $x^2+y^2 \neq 1$

$1+x^2+y^2$ & $1-x^2-y^2$ always continuous

$\Rightarrow$ $\frac{1+x^2+y^2}{1-x^2-y^2}$ cont. whenever $1-x^2-y^2 \neq 0$,

So cont. at all (x,y) with $x^2+y^2 \neq 1$

So F is continuous on its domain

Many notations for this:

"$\{(x,y) : x,y \in \mathbb{R} \ \& \ x^2+y^2 \neq 1\}$"

"all (x,y) with $x^2+y^2 \neq 1$"

"any point except those where $x^2+y^2=1$"

all 3 of these notations are ok