## Extra Credit Assignment 3

Due Friday, February 5, 11:59 PM

Exhibit a surjection from $S^{2}$ to $P^{2}$.
Recall that a function $f: X \rightarrow Y$ between two topological spaces is called continuous if any open subset of $Y$ has open preimage.

Explore ways to give $P^{2}$ a topology so that your surjection is continuous. How many ways can you think of doing this? Is there a "best" way?

