

Homework #4

- [3] Assuming all our averages stay the same, what grade do you need on the final exam to earn a 2.0 in the course? Justify your work by showing your computations.
- [3] Match each surface on the left to a topologically equivalent one on the right.

\mathbb{K}^2	$\mathbb{T}^2 \# \mathbb{P}^2$
$S^2 \# S^2 \# S^2$	S^2
$\mathbb{K}^2 \# \mathbb{P}^2$	$\mathbb{P}^2 \# \mathbb{P}^2$
- [8] Construct a set of diagrams showing (consider using color to help identify edges!). Be sure to clearly communicate what you are doing!
 - $\mathbb{T}^2 \# S^2$ is topologically equivalent to \mathbb{T}^2
 - $\mathbb{P}^2 \# \mathbb{P}^2$ is topologically equivalent to \mathbb{K}^2
- [4] What object in the table on page 80 are the following topologically equivalent to. Briefly justify yourself.
 - $\mathbb{P}^2 \# S^2$
 - $\mathbb{K}^2 \# \mathbb{T}^2$
- [2] Consider the columns numbered 0 through 3 on page 76 and the two columns on page 80 labeled with \mathbb{T}^2 and \mathbb{P}^2 . For column 0 and 1 on page 76 determine which column on page 80 each one corresponds with.