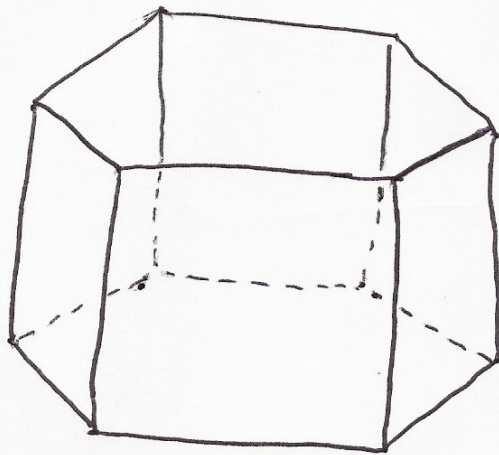


Drawing for Exercise 04.8(c)

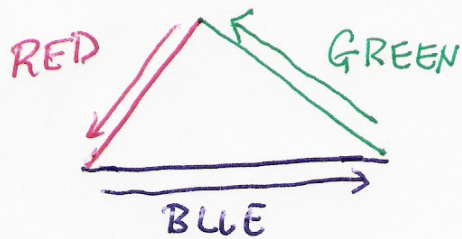
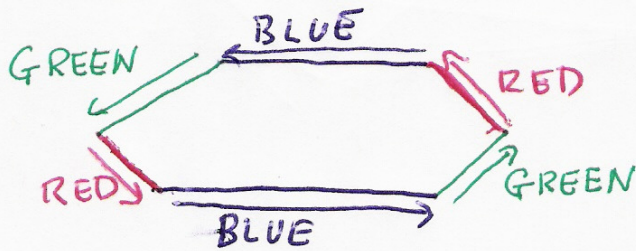
(with $d=2$)

[Hence $3d=6$]



$S^1 \times [0, 1]$
homeo to
lateral faces
of a
hexagonal
prism.

How one forms M_d



In $S^1 \times \{1\}$

one identifies
edges of the same
color in the
indicated direc-
tions.

With these
identifications, the
bottom becomes a
triangle

Each lateral face of the hexagonal prism maps homeomorphically to its image in the quotient space.

If we triangulate the ~~lateral~~ lateral faces of the prism by splitting each face into two 2-simplices along a diagonal, then the objective is to prove that this triangulation passes to a triangulation of the quotient space M_d .

Note: For higher values of d , replace the hexagonal prism by a $3d$ -gonal prism and identify edge 1 with edge 4 , edge 2 with edge 5 , ... edge $3d-2$ with edge 1, edge $3d-1$ with edge 2, edge $3d$ with edge 3.