# \chapter{Recreational Mathematics}

It is important to understand what recreational mathematics is, in order to get a better understanding of the Rubik’s cube. This chapter presents a definition of recreational mathematics and a few examples of recreational mathematical puzzles other than the Rubik’s cube.

## \section{Definition}

Recreation means to do something which is amusing, relaxing and/or fun. Mathematics is somewhat harder to give a precise definition, due to the vast amount of subjects that falls under this term, however most people has a common idea what mathematic is.

Recreational mathematics is hereby defined as mathematical problems, puzzles or games which fun and interesting to the common people. \cite{Singmaster98} \cite[18]{Trigg78}

## \section{Puzzles}

This project is dedicated to the Rubik’s cube and the cube will be covered in details later in this report. This section will rather describe some puzzles related to the Rubik’s cube.

### \subsection{Magic Square}

The Magic Square origins back from the ancient China. It was said that the people near the river Lo made offerings. Every time they made an offering a tortoise would come from the river. On the back of the tortoise there was said to be a Magic Square.

The Magic Square from this tale was a 3 order normal magic square. This is not the only order in which a magic square can be created; it is possible to make an “n” order normal magic square. Although it has been proven that it is not possible to make a 2 order magic square.

### \subsection{Magic Cube}

### \subsection{Magic Puzzles}