

- ▶ Topic for today: **Fun and Games**

Math 190 lecturers

- ▶ Dr Claire Postlethwaite: Room 414,
Email: c.postlethwaite@math.auckland.ac.nz
- ▶ Dr Steven Galbraith: Room 328,
Email: s.galbraith@math.auckland.ac.nz

Some admin

- ▶ Lectures: Mondays and Wednesdays 12-1pm.
- ▶ Tutorials: Thursdays or Fridays 12-1pm.
Tutorials start this week.
- ▶ Study guide — please read it!
- ▶ Text book.
- ▶ Assessment:
 - ▶ Tutorials – participation 5%, solutions 10%.
 - ▶ 4 Assignments – 20%.
 - ▶ Midterm Test – 15%
 - ▶ Exam – 50%.
- ▶ Website.

Dodge Ball

- ▶ Rules of dodge ball.
 - ▶ Game for two people, Player 1 and Player 2. One sheet of paper, all visible at all times. Players play in turn, Player 1 then Player 2.
 - ▶ Player 1's goal is to produce a set of sequences, any one of which matches the single sequences of Player 2. Player 2's goal is to produce a sequence that is not in Player 1's list.
 - ▶ Player 1 starts. In the first row put either O or X in each box.
 - ▶ Then Player 2. Put one X or one O in first box.
 - ▶ Repeat: Player 1 fills out a row, Player 2 fills in one box. Alternate turns until all boxes filled, when game is over.
 - ▶ Player 1 wins if any row matches the sequence of Player 2. Player 2 wins if there is no match.
- ▶ Try it!

Dodge Ball

- ▶ Strategy for each player.
- ▶ Who will win?

Ropes and knots

- ▶ Dropping trou.
- ▶ Hands tied.

Meanie Genie

- ▶ Alley is given nine identical-looking stones by a genie. The genie tells Alley that eight of the stones weigh the same as each other but the ninth stone is heavier and contains a large diamond. The genie gives Alley a set of balance scales, which can be used only twice. Can Alley use the scales to find the stone with the diamond inside?

Important ideas from today:

- ▶ Mathematics involves logical and creative thinking.
- ▶ Thinking can be fun.

For next time

- ▶ Read stories 1, 4 and 5 in section 1.1 of the text.
- ▶ Read 2.1 in the text.
- ▶ Read the study guide for the course.