How much can *you* drink and be able to legally drive?

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Proposed plan

- Groups should be established at the beginning of the first lesson.
- Midway through (e.g. after assignment 3) it may be a good idea to summarize and let each group present their considerations in front of the whole class.
- Ending with a similar presentation round can be beneficial.

Suggested teaching strategy

1. These open-ended activities afford opportunities for students to be reflective and critical of the mathematical models which well-known aspects of everyday life rest upon.

2. Students should work in groups of 3-5, and everybody should be encouraged to participate actively in the discussions. Students can be allowed to reveal to the teacher how they think about, and put to use, mathematics in specific situations, by being prompted to communicate and represent their ideas to other group members and other groups.

3. The students' work in groups should be backed up with 2 or 3 summative discussion-/presentation-sessions in which the entire class participates. These sessions allows the teacher to fine-tune students' usage of mathematical concepts.

4. The teacher should play the role of an interpreter, by listening to students' proposed solutions and endeavoring to refine students' responses. The nature of the activities allows students to evaluate their proposed solutions themselves. It is not, as such, important that students find a "correct" solution. Rather, students should strengthen their deeper understanding of how to argue from mathematics and what it means to model complex and dynamics processes in society.

5. If it is required the teacher may preface the activities by discussing what it means to construct mathematical models (see the accompanying sheet "Mathematical models"). Hereunder
   a. Introducing the different modeling tools (graphs, tables, equations, verbalizations, rules of thumb, etc.)

b. Discussing the power to predict from models, and what it means to argue from a mathematical model)