

# Mathematics I – Presentation

\* Pedro Ramos

pedro.ramos@uah.es

<http://www3.uah.es/pramos>

Office: 405

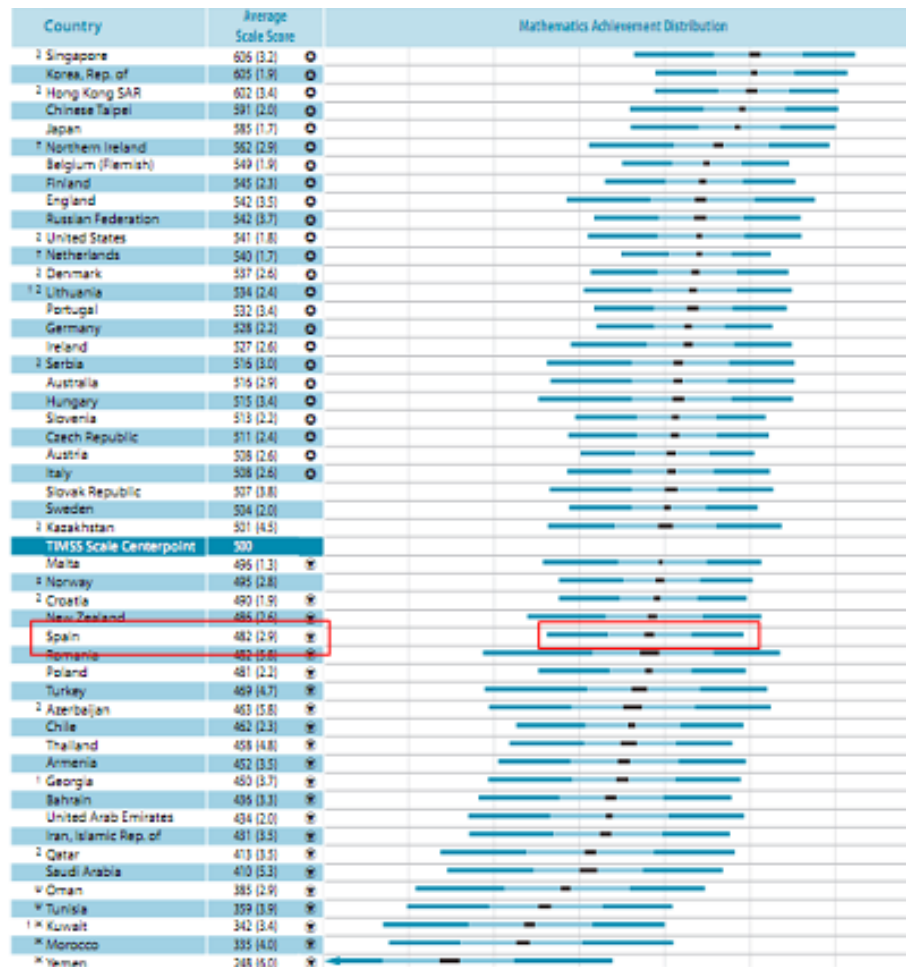
\* Office hours: already in the web page..

Please confirm by email.

# First idea: We have a problem

There is a problem with Mathematics in Spanish elementary school.

TIMSS 2011 (Trends in Math and Science Study) (4th Grade)



# Questions

- \* What is mathematics?
- \* What do you think about mathematics?  
How do you feel about mathematics?
- \* Your mathematics background and the knowledge that an elementary teacher needs
- \* More information about TIMSS.

[http://www.mecd.gob.es/inee/Ultimos\\_informes/PIRLS-TIMSS.html](http://www.mecd.gob.es/inee/Ultimos_informes/PIRLS-TIMSS.html)

# What to do in a math class

- \* Option 1: rote memorization of procedures.
- \* Option 2: reasoning, understanding, talking.

Jo Boaler, Stanford Univ.

“How to learn math”

<https://www.youcubed.org/online-student-course/>

# Syllabus

- Lesson 1: Natural numbers
- Lesson 2: Rational numbers. Fractions. Ratio. Proportions and Percentages.
- Lesson 3: Introduction to logic. Basics of Integer numbers. The algebraic language.

# Evaluation

By default, continuous evaluation. Exceptions to this have to be solicited at the Dean office in the first two weeks of the course.

- Final exam: 40 %.
- The rest, 60 %, is distributed as follows:
  - Mid-term: 20 %.
  - Evaluation of work on problems proposed in weekly practices. Observation of the work during problem sessions. 20 %
  - Tests and problems proposed in practice lessons: 20 %.

# Bibliography

- \* T. Parker, S. Baldrige: Elementary mathematics for teachers. Sefton-Ash Publishing, EE UU, 2008.
- \* Musser, Burger, Peterson. Mathematics for Elementary Teachers: a contemporary approach. Ed. Wiley. 2010.
- \* R. Aharoni. Arithmetic for parents. Sumizdat, 2008.
- \* Isidro Segovia, Luis Rico (editores). Matemáticas para maestros de educación primaria. Ed. Pirámide, 2011.