Team-Based Learning in Analysis I

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Analysis: 😓 🙄 😟 Lectures: 😶 😐 😑

The three years before TEM:

- About 24 percent of the students use compensation and is satisfied with grade 5
- 15 to 20 percent of the students decides not to take Analysis in their first year of study

The first four years in TEM:

- Percentage of students with a pass for this course:

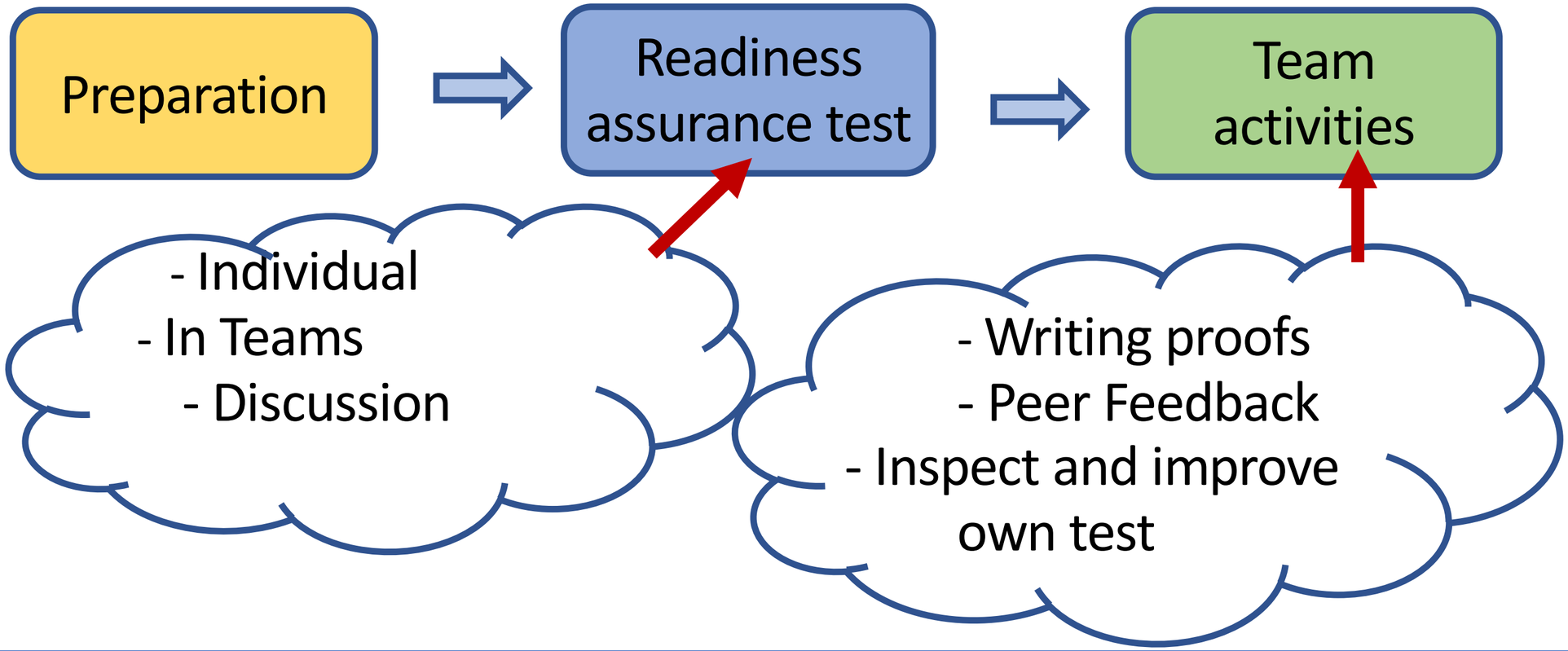
  2013: 50% 2014: 71%

  2015: 60% 2016: 58%

- About 10% of the students use a compensation rule for Analysis.

Can TBL improve the performance of students in Analysis?

The three phases of Team-Based Learning



The Principles of Team-Based Learning

- Select the teams yourself. Create teams of students with different talents.
- Give students both grades for their individual work and for their teamwork.
- Regular feedback is important.
- The team assignment is formulated openly so that the student can start a discussion.
- All teams have the same assignments and they deliver their results simultaneously.
- Take time for reflection.

Examples of RAT-questions

- Which of the following is true: from

a) A sequence of integers that is bounded above has a limit.

b) A monotone sequence of real numbers has a convergent subsequence.

c) An increasing sequence of integers that is bounded from above has a convergent subsequence.

d) A monotone sequence of real numbers that is bounded from above has a limit.

- What is the correct definition of a Cauchy-sequence?

a)…. b) …. c)… d)……

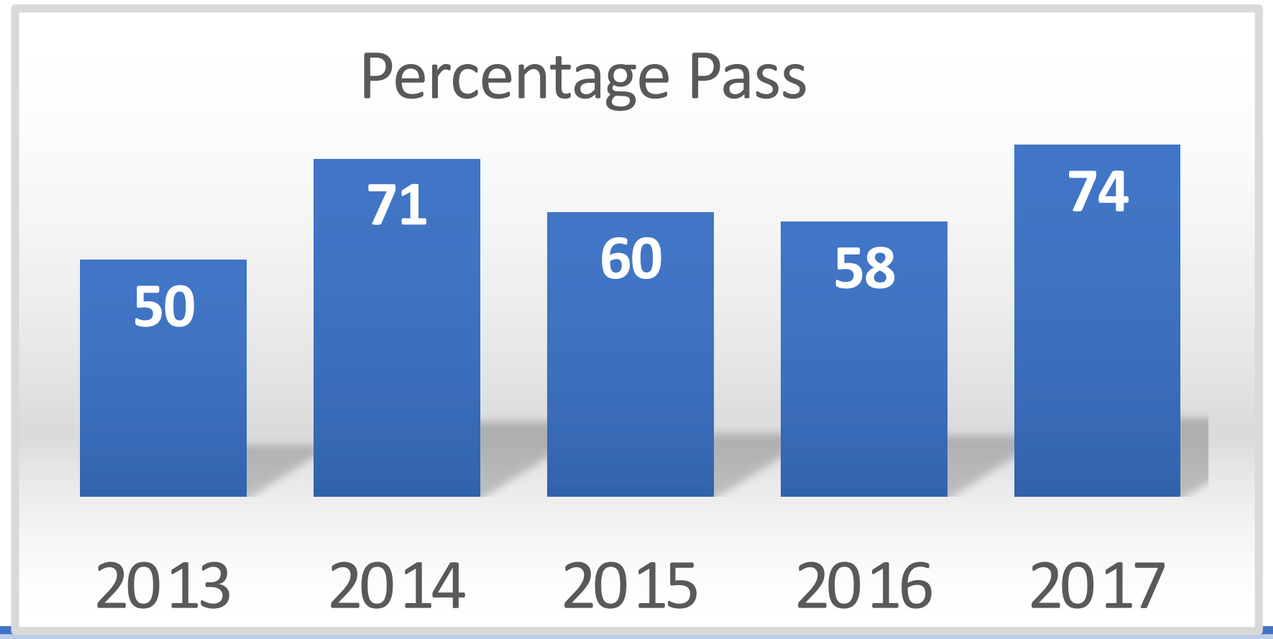
- Writing exercise:

Let E be a subset of R . A point a in R is called a cluster point of E if the intersection of E and the interval (a- r ; a + r) contains infinitely many points for every r > 0.

Prove that every bounded infinite subset of R has at least one cluster point.

Results and Evaluation

74% of the students has grade 6 or higher



From students survey:

- 75% of the students increase reading the textbook
- Students like the discussions
- Half of the group agrees that learning with TBL helps to understand

Analysis 😀