

Maximizing performance and minimizing dropout rate with the help of flow: a gamified mathematics course



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The course



- Number theory 1.
- 2020/21 fall semester
- 72 students
- 60 min. lectures
- 90 min. tutorials
- Teams, Canvas





Our goals



Motivation
Engagement

Deeper
understanding

Decrease
drop-out rate

Definition



the use of elements of games in non-related
game contexts (2011)



enhancing a service with gameful experiences
to support value creation (2017)





Learning psychology



Test enhanced learning



Distributed learning



Cumulative testing





Weekly list of exercises



For explorers

- Interesting problems
- Easter eggs

For achievers

- Best solutions
- Challenges

For socializers

- Explain to someone
- Forums

For killers

- Leaderboards
- Beat your instructor!



Results

