ILP 2020 – W4S3
Midterm feedback and more practice

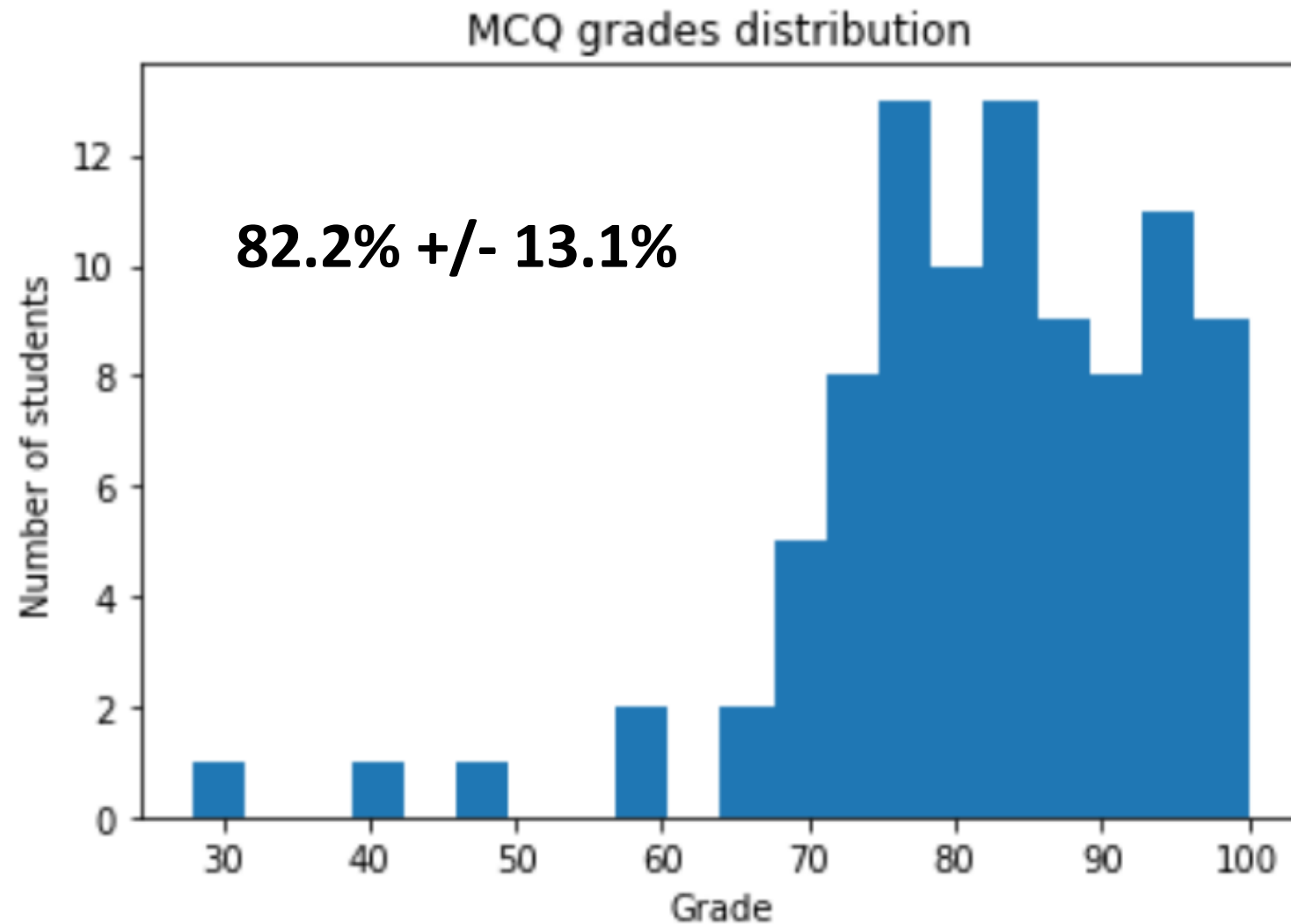Matthieu DE MARI – Singapore University of Technology and Design
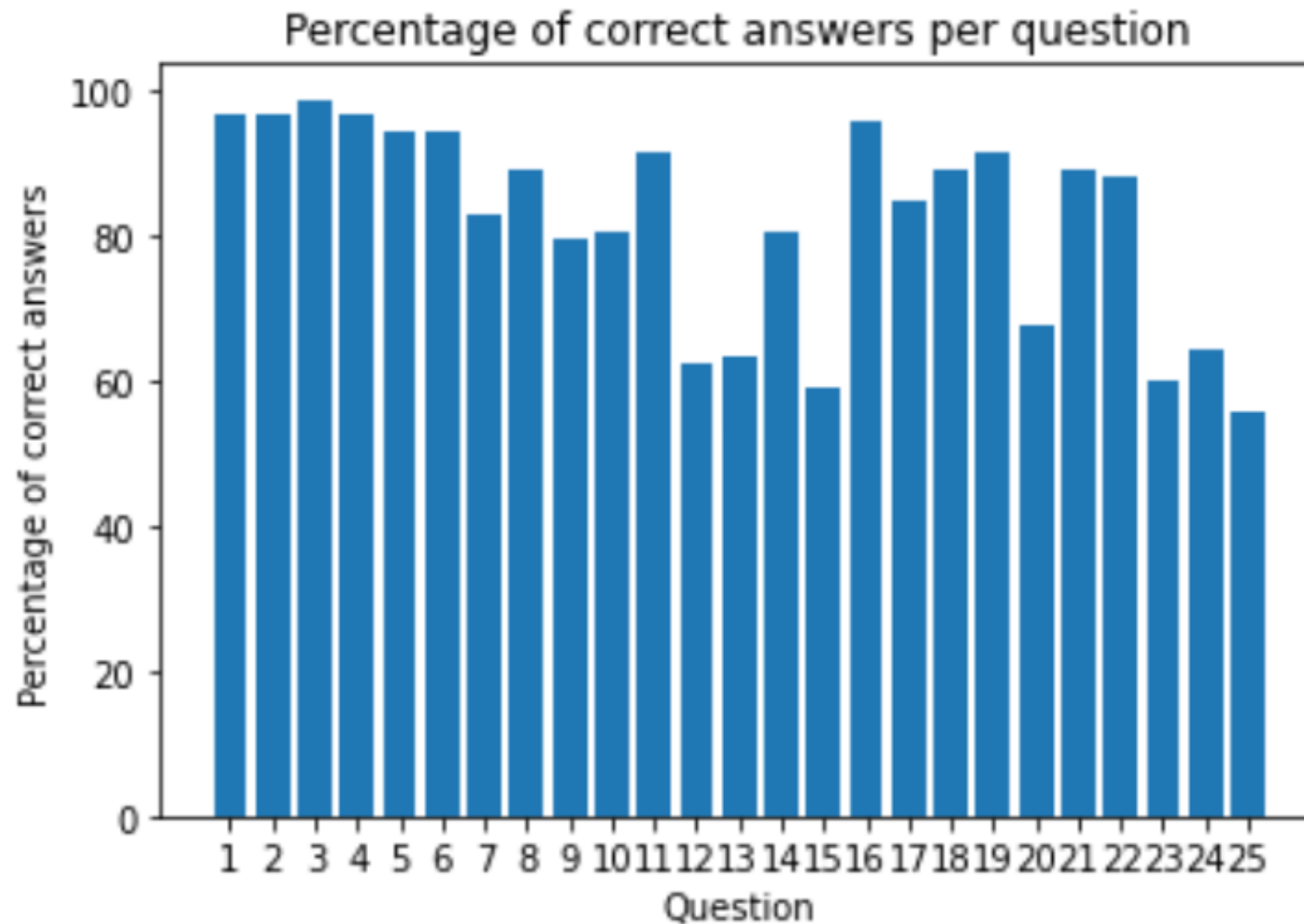

SINGAPORE UNIVERSITY OF
TECHNOLOGY AND DESIGN

Outline (Week4, Session3 – W4S3)

- Midterm feedback

- Answers to MCQ and activities

- Practice on the midterm of the other group

- Practice on the interview questions (for students who missed the midterm)
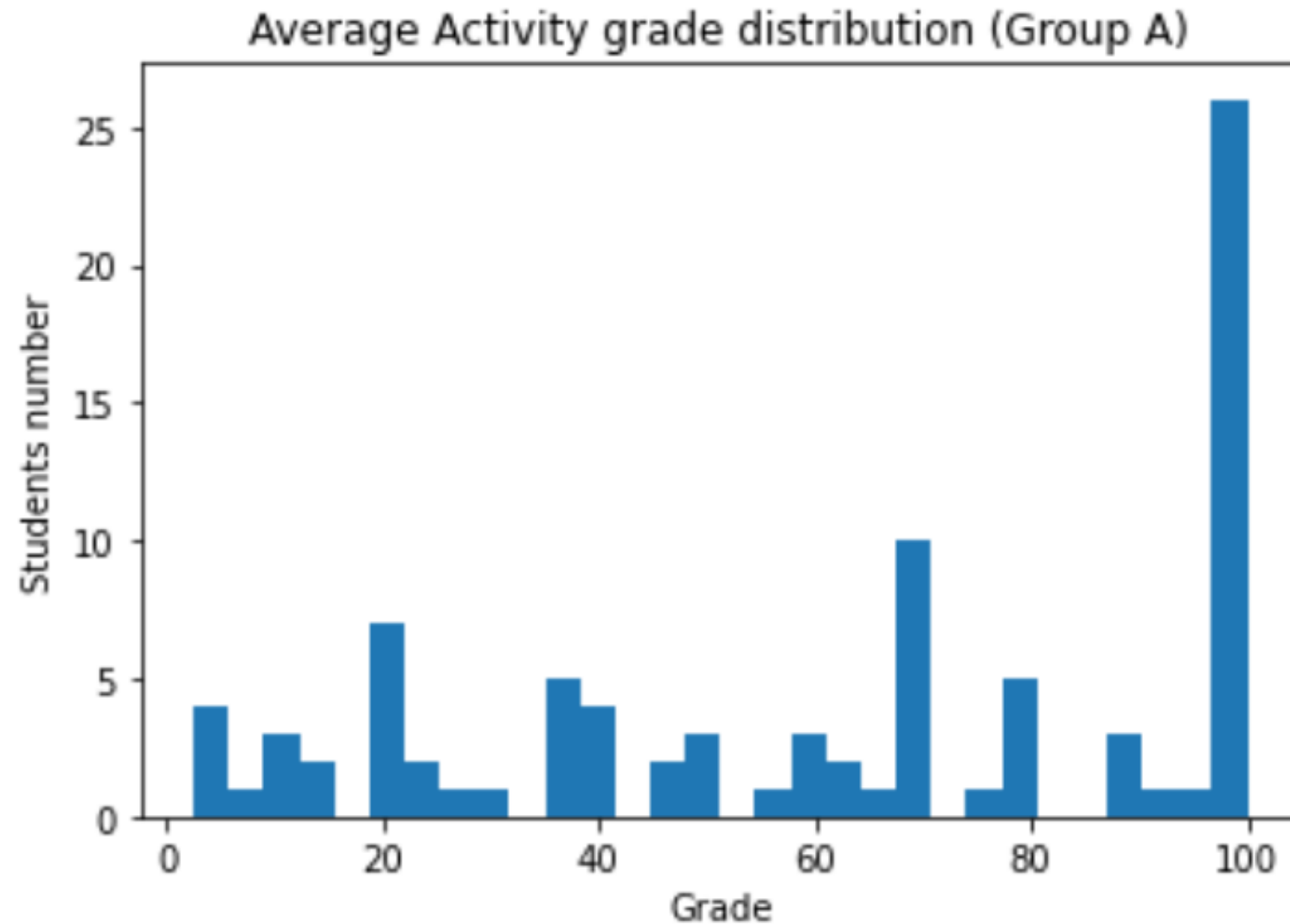
Midterm Scores (Group A)

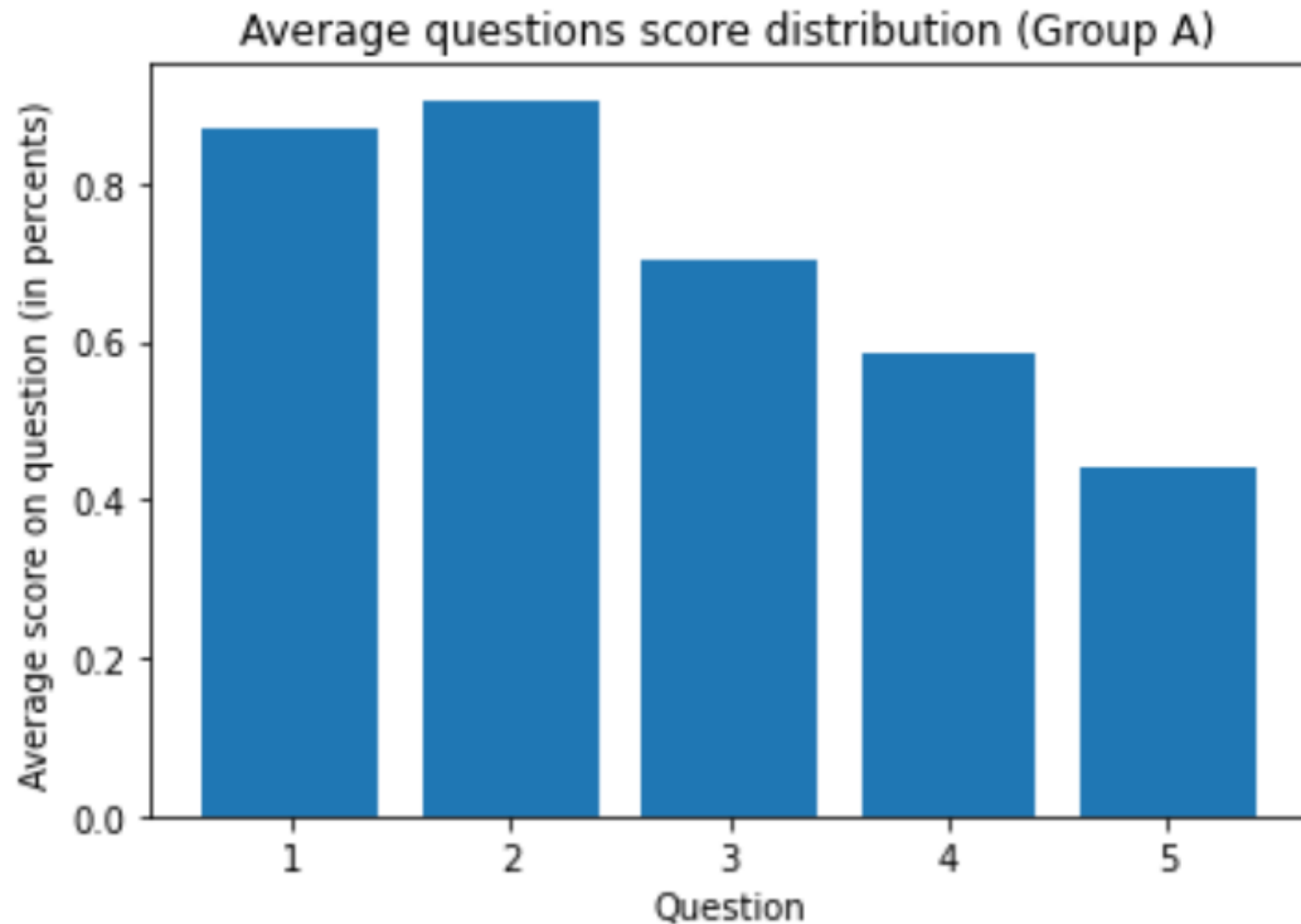**82.2% +/- 13.1%**

Midterm Scores (Group A)

Percentage of correct answers per question

Midterm Scores (Group A)

Average Activity grade distribution (Group A)

Midterm Scores (Group A)

Average questions score distribution (Group A)

Midterm Scores (Group B)

MCQ grades distribution

82.9% +/- 15.6%

Midterm Scores (Group B)

Note: Question 11 was given for free due to a typo.

Percentage of correct answers per question

Midterm Scores (Group B)
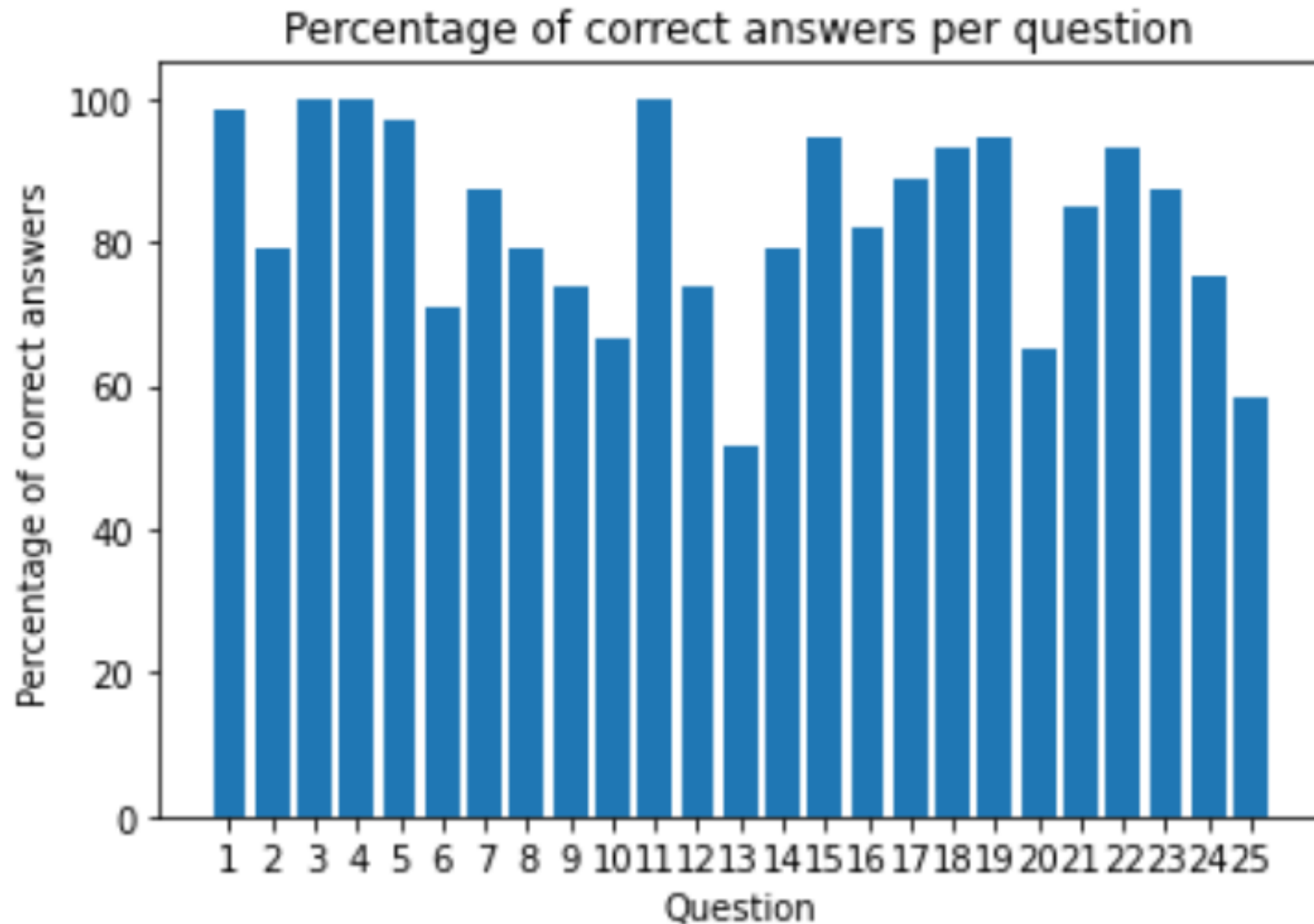
Average Activity grade distribution (Group B)
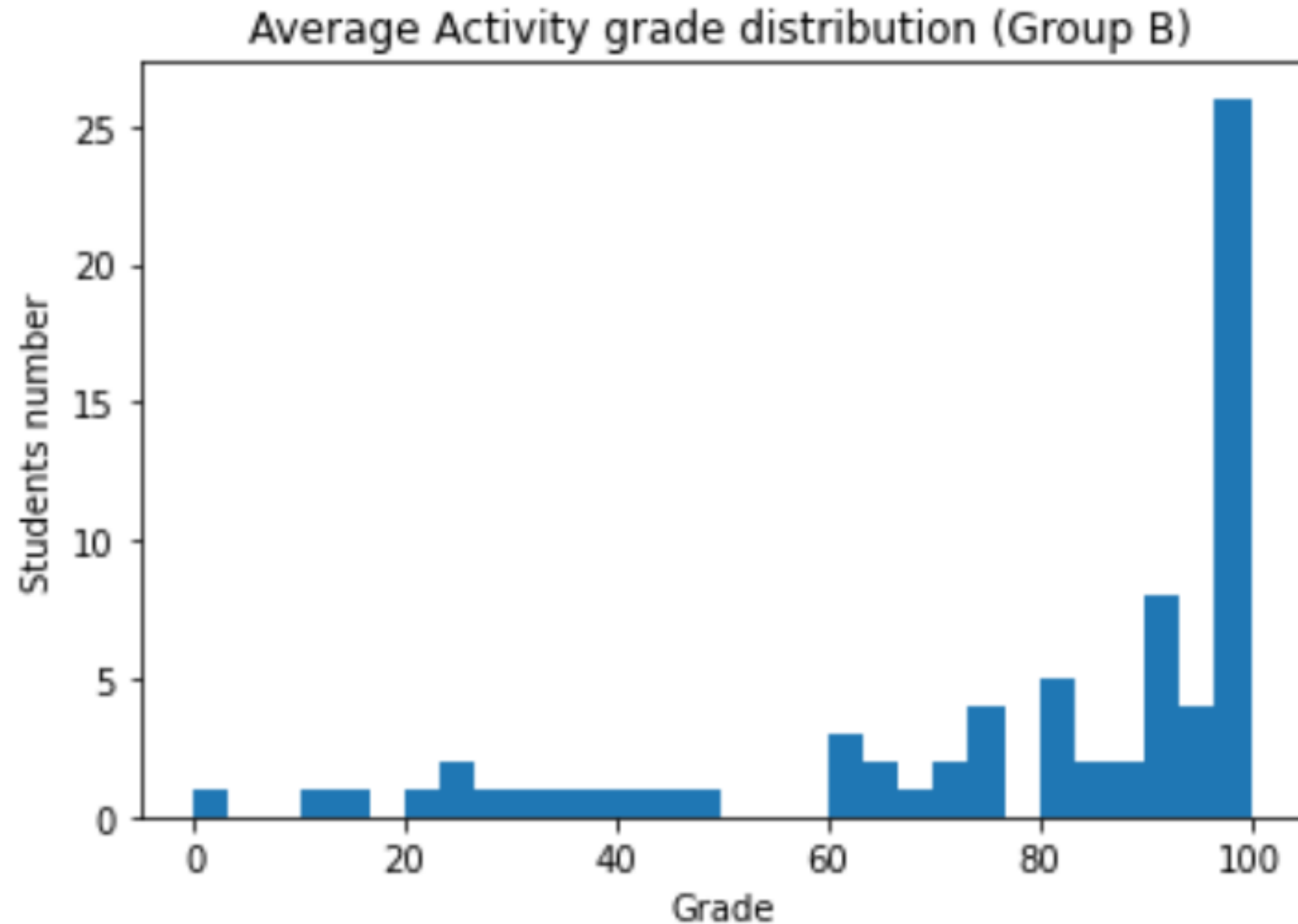
Midterm Scores (Group B)

Overall stats (Group A)

Average Midterm grade distribution (Group A)

76.4% +/- 20.3%

Overall stats (Group B)

Average Midterm grade distribution (Group B)

82.9% +/- 15.6%
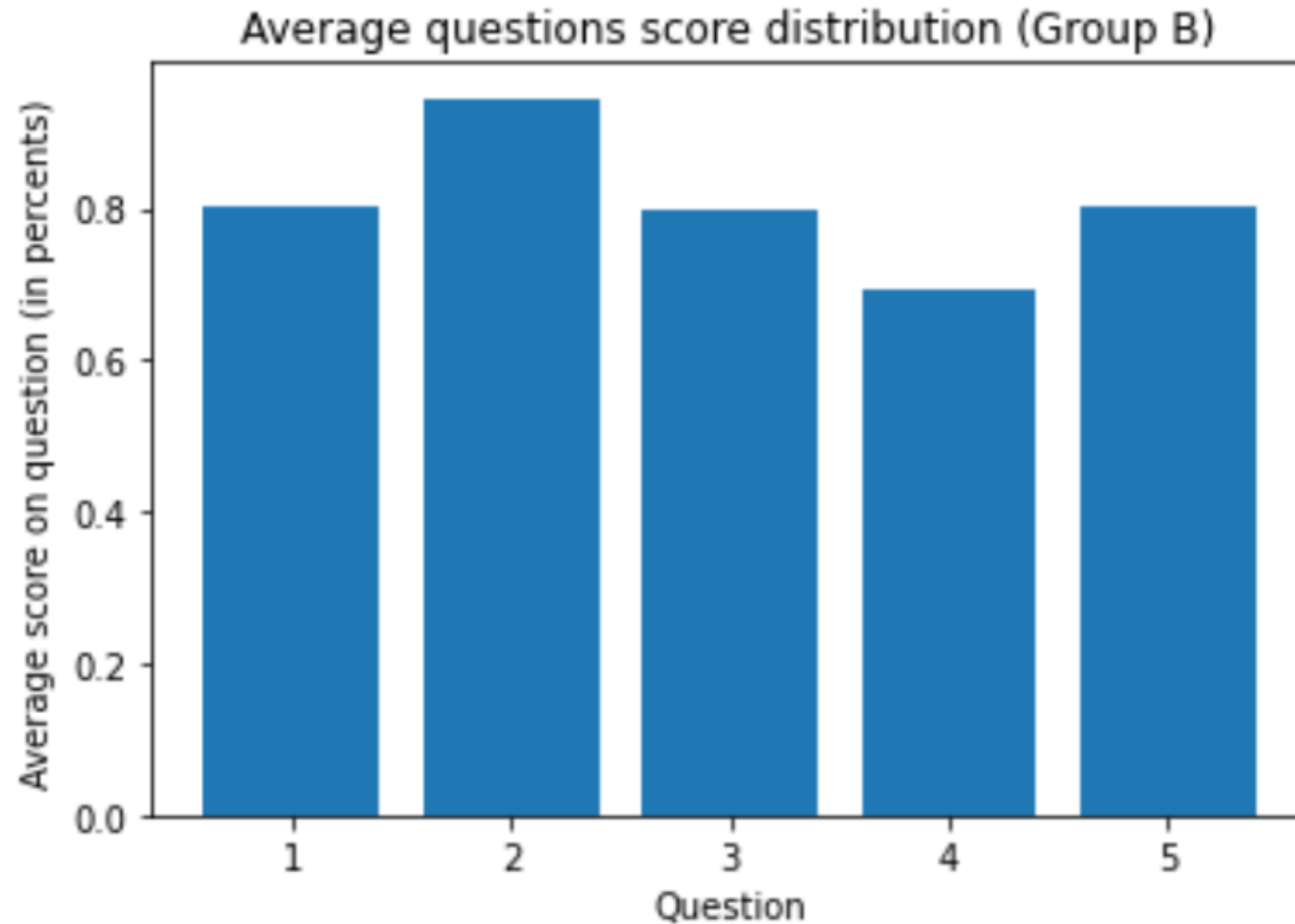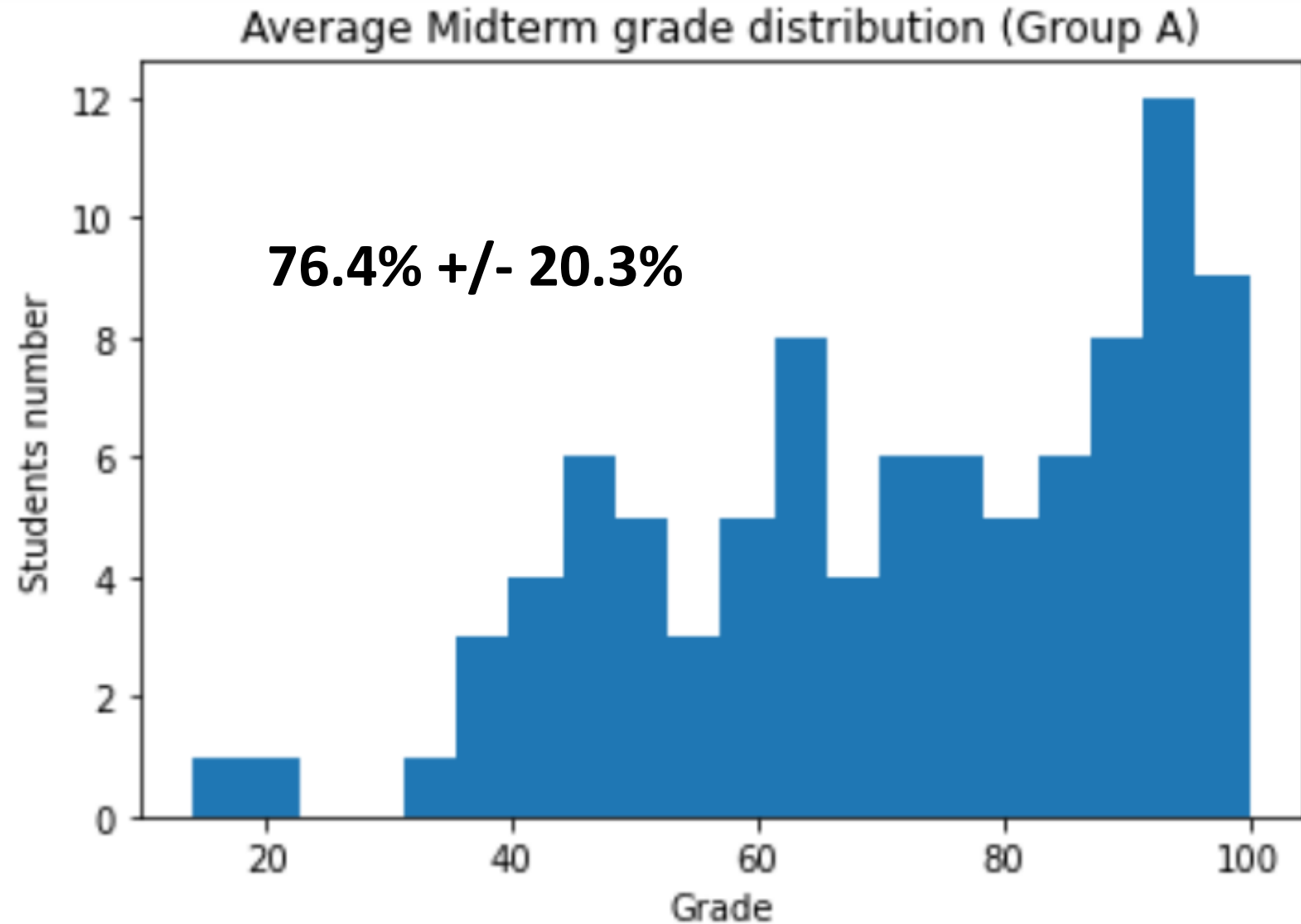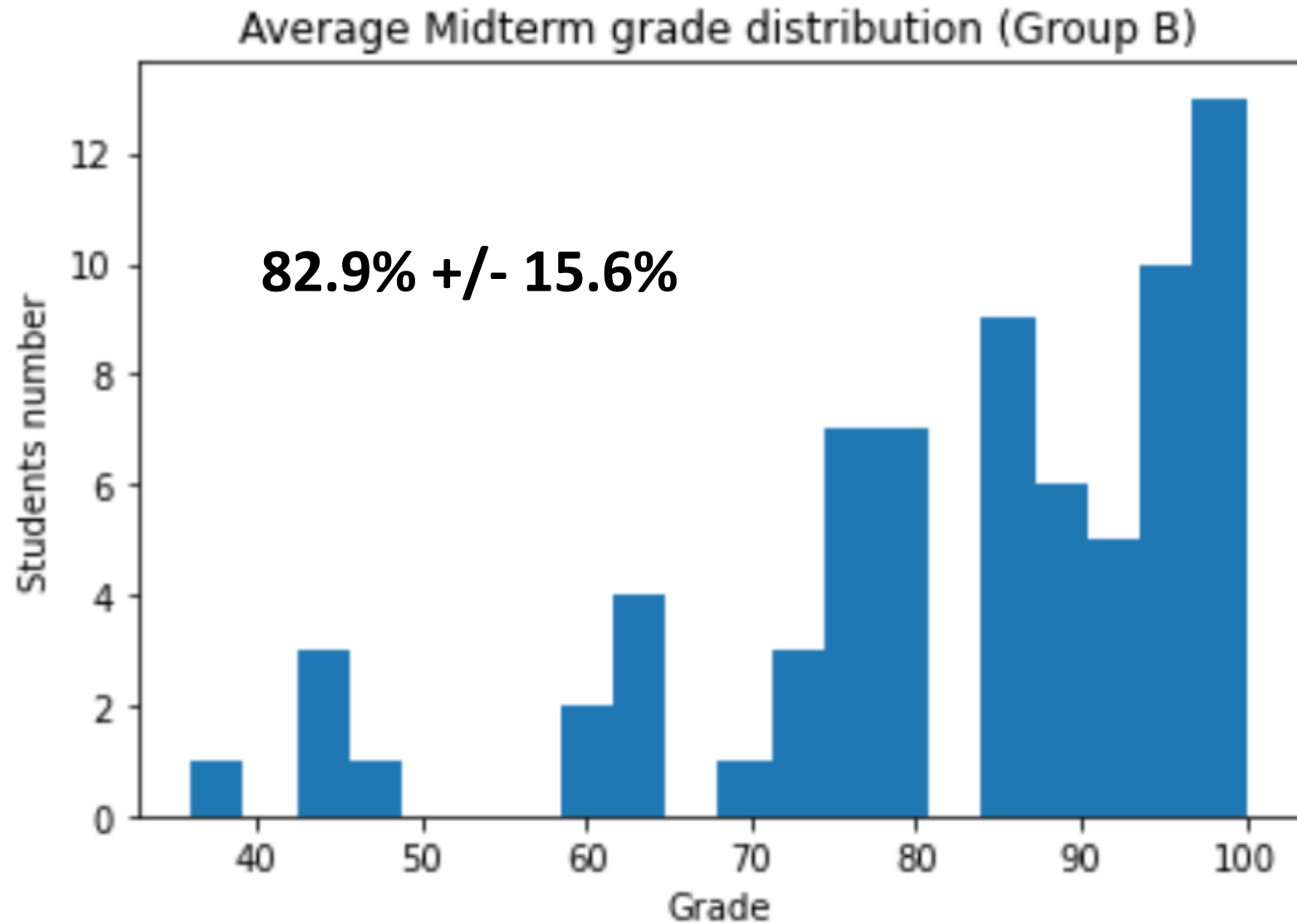
100% club

The students below scored 100% on the midterm (both MCQ and activities)

- Tang Yi Wei Jennifer (1005487)
- Pung Junhao Louis (1005039)
- Sean Yap Zhan Hao (1005153)
- Leong Keng Hoy (1005164)
- Ernest Ng Wei Jun (1005212)
- Timothy Lai Weng Wai (1005287)

Activity 1A (typical errors)

- Printed the expected output, instead of returning it.

- Confusing a//b and a%b.

- Wrong order on the computation of weeks, days and hours (might affect the final result).

- Using / and round() incorrectly, instead of //.

- Did not split the hours into all values (weeks, days and hours).

- Incorrect use of int() to round numbers.

Activity 2A (typical errors)

- Incorrect use of Booleans, confusion between /, // and %.
- Forgot the year%100 == 0 exception.
- Missing a return False for cases that do not fall in any of the categories.

Activity 3A (typical errors)

- Using log() incorrectly to compute the value.

- Using prime divisors.

- Missing return.

- Counter is not equal to int(number/2).
  Try the number = 9 case to see for yourself.

- Some infinite while loops.

- Using <> instead of !=
  (<> works in Matlab, not in Python).

Activity 4A (typical errors)

- Using nested for loops, unnecessary.

- Using min/max comparison to decide on consecutive values.
  Max(list) – min(list) == len(list) is not a valid Boolean to check for consecutive values in lists.
  Try [1,1,1,4] for a counter-example.

- Incorrect use of extend() instead of append().

- Incorrect incrementation of a counter, to count for elements.

- Index out of bounds (checking next element does not work when index is the last value).

- Reupdating Boolean to False, in cases that do not work.

Activity 5A (typical errors)

- Wrong upper bound to decide on the maximal values to try.
- Reupdating Boolean to False, in cases that do not work.
- Forgetting to break the for loop in cases that work.
- Index out of bounds.
- Missing the for loops, using % instead.
- Incorrect procedure for checking that $\sqrt{number - a^2}$ is integer.
- Breaking if False.
- List of values for a and b have been typed manually.
- Single break in nested for loop (needs two).

Practice on B

- Let us practice the MCQ from Midterm Group B.

https://docs.google.com/forms/d/e/1FAIpQLSeu58K0MIlb0FDe7rQrdE_h5HdVqjxfoGEuRGY0ReSqR5VVCA/viewform?usp=sf_link

- And the activities from Midterm Group B.
- Check notebook in .zip archive of W4S3.

Activity 1B (typical errors)

- Printed the expected output, instead of returning it.

- Confusing a//b and a%b.

- Wrong order on the computation of hours, minutes and seconds (might affect the final result).

- Using / and round() incorrectly, instead of //.

- Did not split the hours into all values (hours, minutes and seconds).

- Incorrect use of int() to round numbers.

Activity 2B (typical errors)

- Return 0 instead of None for the False case. Was not penalized.
- Missing a return.
- Incorrect indent for return (in else statement, not outside of it).

Activity 3B (typical errors)

- Using log() incorrectly to compute the value.

- Missing return.

- Some infinite while loops.

- Returning months instead of months – 1.

- Non-integer value for months (especially for those who solved it using log()).

Activity 4B (typical errors)

- Using nested for loops, unnecessary.

- Index out of bounds (checking next element does not work when index is the last value).

- Too many breaks.

- Reupdating Boolean to False, in cases that do not work.

Activity 5B (typical errors)

- Fails to check the 1 case (1 is not a prime number)

- Reupdating Boolean to False, in cases that do not work.

- Forgetting to break the for loop in cases that make non-prime numbers.

- Index out of bounds.

- Does not check for all divisors.

Practice on A

- Let us practice the MCQ from Midterm Group A.

https://docs.google.com/forms/d/e/1FAIpQLScq2MBgWDDqApsWhLeSwFoz7uZdxaT_5Cqaffs01CG5bYw6CA/viewform?usp=sf_link

- And the activities from Midterm Group A.
- Check notebook in .zip archive of W4S3.

Extra activities for interviews (ppl who did not attend the midterm)

- If time allows, you can have a look at the extra activities, which were given to the students who were not able to attend the midterm.

- Note for these students: your grades have not been released yet.

Conclusion

- Midterm feedback

- Answers to MCQ and activities

- Practice on the midterm of the other group

- Practice on the interview questions (for students who missed the midterm)