

# Summary of Results of Mathematics Tests (Estonia)

- The total number of participants was 37 students
- They were first year students of the following professions: cooks, logisticians, car mechanics and cabinet makers

# Sample for the Test

- Ages of the students 15 - 16 years old (68%) and 17 - 18 years old (32%)

NB! As the students did not get marks for taking the tests, I believe they did not give very much thought when they gave their answers.

# Essential results of the test (I)

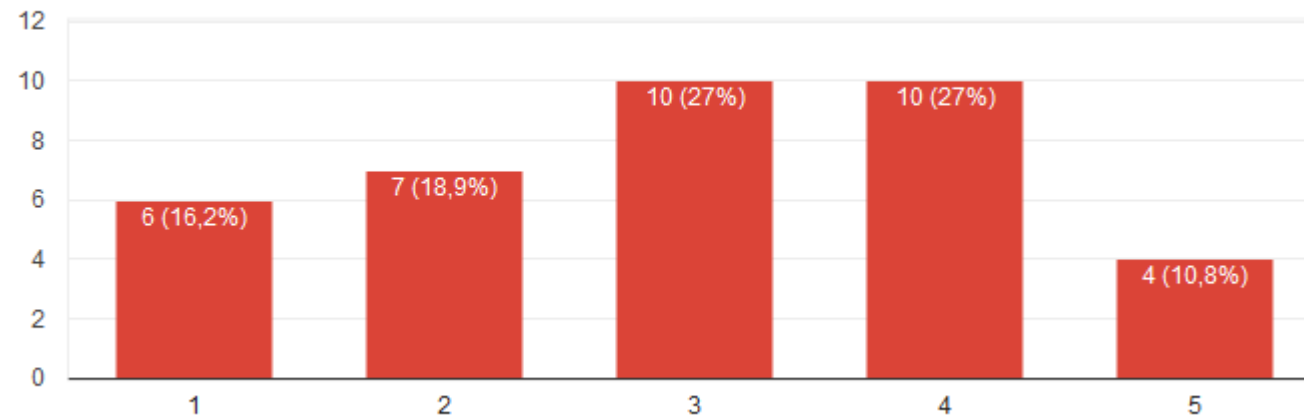
- **Do You like mathematics?**
  - ❖ 43% did not like math (grades 1 and 2)
  - ❖ 35% assessed liking of math as grade 3
  - ❖ 22% liked or rather liked math (grades 4 and 5)

# Essential results of the test (II)

- Do You think that mathematics is easy?
  - ❖ 38% of students assessed math as easy
  - ❖ 62% of students assessed math as difficult
- How relevant you find mathematics in your field of studies?
  - ❖ 16% not relevant
  - ❖ 32% rather relevant
  - ❖ 52% relevant

# Essential results of the test (II)

- How interested you are in your studies in general?



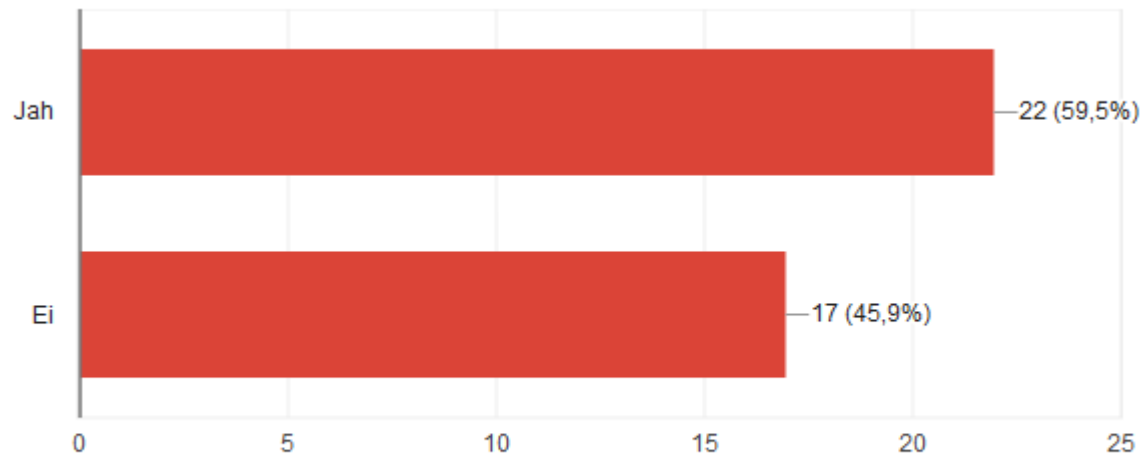
# Essential results of the test (IV)

What kind of materials have you used in learning mathematics?

- 95% Text books
- 57% Electronic materials
- 16% Interactive on-line tools
- 27% Lecture notes
- 14% Private instruction

# Essential results of the test (V)

If you use e-learning materials, do you find them useful and interesting?



# Essential results of the test (VI)

Why don't you find the e-learning materials useful and interesting?

Answers by students:

- Don't know - 16%
- Interesting to find in the internet - 5%
- Save time - 7%
- Possible to study everywhere - 5%
- As I study to become a logistician and the work of a logistician is based on the internet today, it is better to study as E-learning. It is interesting for the fact that as young people spend their time in a smart phone or computer anyway, studying in the internet Works as 2in1 - 3%
- Easier and more convenient - 45%
- Don't like E-material - 4%
- E-materials are interesting and they convey much information - 35%



# Results of Exercises (I)

## Exercises 1: Convert to the requested unit

- 62% had converted the units correctly
- 38% cannot convert units correctly

# Results of Exercises (II)

## Exercises 2: Percentages

- 65% of students solved the exercises correctly
- 35% of students failed to solve the exercises correctly

# Results of Exercises (III)

Exercises 3: Solve the previous equation by giving the value of x:

$$\frac{3}{x} = \frac{7}{21}$$

- Correct result 46%
- Incorrect result 54%

# Results of Exercises (IV)

Exercises 3: Simplify the expression above

❖  $(a + 3)^2$

- 60% correct
- 40% incorrect

❖  $x^2 - 9$

- 60% correct
- 40% incorrect

# Results of Exercises (IV)

## 4. Equations

Solve the linear equation  $3x+9=6$

- 60% correct
- 40% incorrect

# Results of Exercises (V)

## 4. Quadratic equations

Choose the right solution for the following equation

- 38% correct
- 62% incorrect

# Results of Exercises (VI)

5. Count out

What is the result?

- 46% correct
- 54% incorrect

# Results of Exercises (VII)

5. Planimetry. The hypotenuse of a right triangle is 10 cm and one of the other sides is 80 mm. How long is the third side in centimetres?

- 32% correct
- 68% incorrect



# Results of Exercises (VIII)

6. Name the geometric shapes. What shape is this?

- 90% recognised the shapes
- 10% failed to recognise the shapes

# To sum up

The most problematic seemed to be the following topics:

- solving of quadratic equations
- counting
- solving of right-angled triangle

Any questions?

## Thank you