

MATHEMATICS COMPETITION FOR
THE SEVENTH GRADERS OF OULU REGION 2026

- The time allotted is 50 minutes.
- The allowed tools are writing and drawing instruments, i.e. pencil, paper, and eraser. Calculators and mathematical tables are not allowed.
- Each problem has one correct answer. Wrong answers do not reduce points.
- The problems are not ordered in increasing difficulty, but the first problems are likely to be easier than the last ones.

1. Calculate $11 - 10 + 13 - 12 + 15 - 14 + 17 - 16 + 19 - 18$

a) -5 b) -1 c) 0 d) 1 e) 5

2. Calculate $2,1 + 2,01 + 2,001 + 2,0001$

a) $2,1111$ b) $2,4$ c) $8,1$ d) $8,1111$ e) $8,4$

3. On the last day of the year, Aleksí is 10 years old and Birgitta is three years older than Aleksí. At that moment, Carlos is three times as old as Birgitta. Years later, on the last day of the year, when Carlos is 50 years old, how old is Aleksí?

a) 12 years old b) 17 years old c) 21 years old d) 23 years old e) 27 years old

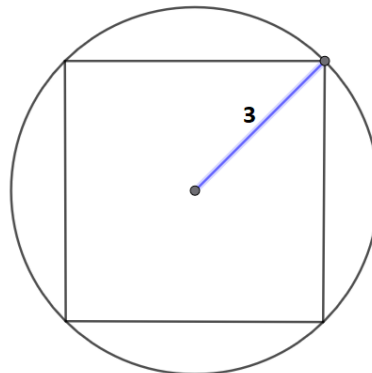
4. Veera has to wait 105 minutes for a badly delayed bus. How long is the waiting time expressed in hours?

a) 1,25 hours b) 1,45 hours c) 1,5 hours d) 1,7 hours e) 1,75 hours

5. Consider the sequence 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, which contains 12 numbers. Determine how the sequence is formed. Then calculate the 14th number of the sequence when it is continued.

a) 201 b) 257 c) 343 d) 377 e) 433

6. The radius of a circle is 3. A square is drawn inside it as shown in the figure. Calculate the area of the square.



- a) 9 b) 12 c) 15 d) 16 e) 18

7. Leevi buys a cow at the market for 2500 euros and sells it for 2700 euros. He later buys the cow back for 2200 euros and sells it again for 2400 euros. How much more or less money does Leevi have at the end compared to the beginning?

- a) 400 euros less b) 100 euros less c) the same amount
d) 100 euros more e) 400 euros more

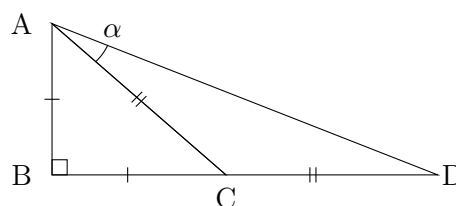
8. Of the 22 students in a class, 7 play football and 10 play volleyball. Eight of the students play neither football nor volleyball. How many students in the class play both football and volleyball?

- a) 3 b) 5 c) 8 d) 11 e) 14

9. Anni rolls a standard six-sided die. After each roll she writes down the number she gets. How many times does Anni need to roll to be certain that at least one number appears three times on the paper?

- a) 3 b) 13 c) 18 d) 19 e) It might never happen.

10. The angle $\angle CAD$ in the figure is denoted by α . Calculate the size of angle α when sides AB and BC are equal in length, sides AC and CD are equal in length, and angle $\angle CBA$ is a right angle.



- a) 20 degrees b) 22,5 degrees c) 25 degrees d) 30 degrees e) 45 degrees

11. A magpie and a crow initially have the same number of beads in their nests. The magpie gathers more beads, after which its number of beads has tripled. The crow doubles its number of beads. After this, the magpie gathers 49 more beads and the crow 76 more beads, and then they again have the same number of beads. How many beads were originally in one nest?

- a) 13 b) 19 c) 22 d) 27 e) 33

12. Huey, Dewey, Louie and Mickey have each chosen a different integer. They challenge Donald to deduce whose number is the greatest by giving the following clues:

- Huey's number is not among the two smallest,
- Dewey's number is either the largest or the smallest,
- If Dewey's number is the smallest, then Louie's number is the largest,
- Mickey's number is either smaller than Dewey's number or greater than Huey's number.

- a) Huey b) Dewey c) Louie d) Mickey
e) The problem cannot be solved with the given information.

13. There is a bucket in the yard with 0,5 cm of water at the bottom. It rains heavily for three days. On the first rainy day the water height doubles, on the second it triples, and on the third it quadruples. After the three rainy days come three sunny days. On the first sunny day the water height decreases by a fraction of $\frac{1}{12}$, on the second by $\frac{1}{11}$, and on the third by $\frac{1}{10}$. How many centimetres of water are in the bucket after six days?

- a) 8 cm b) 9 cm c) 10 cm d) 11 cm e) 12 cm

14. A number is called a square number if it is obtained as the result when an integer is multiplied by itself. For example, 9 is a square number because $9 = 3 \cdot 3$. How many square numbers are there between 440 and 10001?

- a) 45 b) 79 c) 80 d) 85 e) 100

15. There is one whole pizza on a table. People are lining up to take slices from the pizza so that the first person is allowed to take $\frac{1}{3}$ of the pizza, the second person $\frac{1}{4}$ of the pizza's original size, the third $\frac{1}{5}$, and so on. For which person in line does it happen that they can no longer receive their full promised share of the pizza?

- a) the third b) the fourth c) the fifth d) the sixth e) The pizza never runs out.