



Winter 2018./2019.

SCHOOL	
TEAM NUMBER	
CATEGORY	D, 7th year
COMMISSIONER	

	Student's name and surname	Year	Mentor's name and surname
1.			
2.			

ANSWERS:

7th year					
7.1.		7.4.		7.8.	
7.2.		7.5.		7.9.	
7.3.		7.6.		7.10.	
		7.7.		7.11.	
				7.12.	
				7.13.	
				7.14.	
				7.15.	

I ♥ MATematika

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CORRECT ANSWER: 10 pts	ANSWER „E“ : 0 pts	FALSE ANSWER: -2 pts
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7.1. Jenny, Lucy and Sofia take lessons two time a week for one class:maths, programming and astronomy. Every day in the week except for Sunday, a lesson from one class takes place, but never the same class two days in a row. Sofia trains soccers on Monday and Wednesday, and on Tuesdays goes to the cinema with Lucy. Jenny has schooling til late hours on Monday so she doesn't go to lessons then. What girls takes lessons on Friday?

A. Jenny	B. Lucy	C. Sofia	D. Can't be determined	E. We don't want to answer
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7.2. Point A(5, 3) is the vertex of a square ABCD, vertex D of that square belongs to the oridnate axis. What answerr can be the sum of coordiantes of the vertex that is opposite of the vertex A, if that vertex is on axis ?

A. 5	B. 8	C. 11	D. Can't be determined	E. We don't want to answer
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7.3.What time is it if the legs of the clock close an angle of 120°.

A. 3:35	B. 1:25	C. 18:50	D. 16:00	E. We don't want to answer
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Correct answer: 20 points	Answer „E“: 0 points	False answer: -4 points
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7.4. How many pairs (x, y) of whole numbers x and y satisfy the equation $\frac{6}{x} = \frac{y}{3}$?

A. 12	B. 8	C. 6	D. None of the above	E. We don't want to answer
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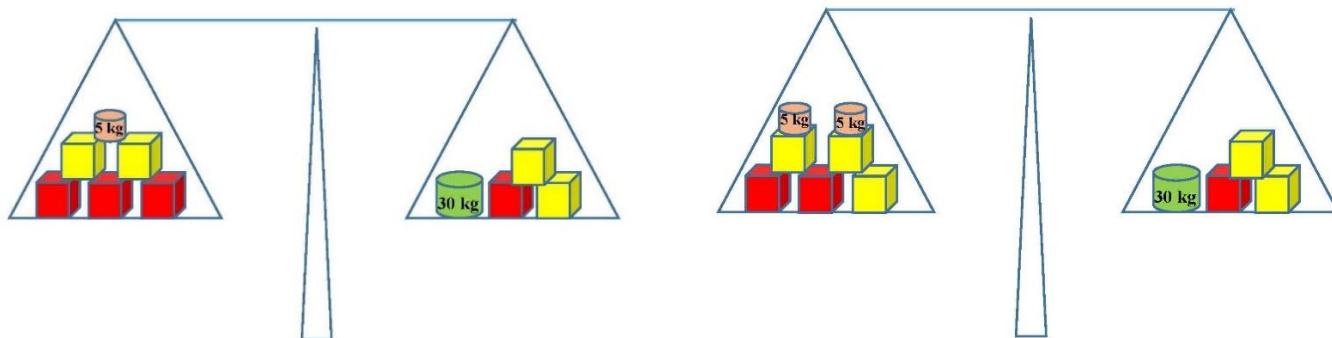
7.5. Vertices of a paper square are folded so that they overlap in the centre of the square. When this process is repeated once again, what is the surface of the resulting shape in comparison to the initial square?

A. 2 times smaller	B. 8 times smaller	C. 4 times smaller	D. Can't be determined	E. We don't want to answer
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7.6. When some number a is added to both the numerator and the denominator of the fraction $\frac{1}{5}$ the result is $\frac{1}{2}$. What is the value of $3a-5$?

A. 3	B. -3	C. 4	D. None of the above	E. We don't want to answer
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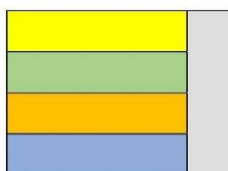
7.7. On a scale there are two types of cubes along with a few small weights of 5kg and a larger weight of 30kg. What is the difference in mass between the two types of cubes if the scale is in equilibrium?



A. 5.5 kg	B. 7.5 kg	C. 5 kg	D. None of the above	E. We don't want to answer
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Correct answer: 30 points	Answer „E“: 0 points	False answer: -6 points
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7.8. The five congruent rectangles with a perimeter of 20 cm form a larger rectangle. What is its perimeter?



A. 100 cm	B. 40 cm	C. 36 cm	D. Can't be determined	E. We don't want to answer
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7.9. What is the area of a triangle ABC defined by the points $A(-3, 1)$, $B(2, -2)$ and $C(5, 3)$?

A. 14 cm^2	B. 17 cm^2	C. 16 cm^2	D. Can't be determined	E. We don't want to answer
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7.10. What is the sum of all two-digit numbers with odd and different digits?

A. 1100	B. 1375	C. manje od 1000	D. više od 1500	E. We don't want to answer
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7.11. With how many zeros does the product of the first 100 even numbers end?

A. 10	B. 20	C. 24	D. Can't be determined	E. We don't want to answer
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7.12. How many consecutive natural numbers do we have to multiply to make sure that the resulting sum is divisible by 8?

A. 4	B. 6	C. 8	D. Can't be determined	E. We don't want to answer
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7.13. Anna is three times as old as her brother Greg. When Greg is twice as old as he is today, by what factor will Anna's age be greater than Greg's?

A. 6	B. 4	C. 3	D. 2	E. We don't want to answer
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7.14. The sum of the lowest and highest denominator of some number n is 1357. What is the sum of the lowest and second highest number n ?

A. 678	B. 681	C. 680	D. Can't be determined	E. We don't want to answer
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7.15. In how many different ways can we fill a 4 x 4 board with natural numbers, so that the sum of each two adjacent fields is 2?

A. Greater than 10	B. 6	C. 3	D. 2	E. We don't want to answer
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