



Winter 2018./2019.

SCHOOL	
TEAM NUMBER	
CATEGORY	D, 6th year
COMMISSIONER	

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

ANSWERS:

6th year					
6.1.		6.4.		6.8.	
6.2.		6.5.		6.9.	
6.3.		6.6.		6.10.	
		6.7.		6.11.	
				6.12.	
				6.13.	
				6.14.	
				6.15.	

I ♥ **MATematika**

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CORRECT ANSWER: 10 pts	ANSWER „E“ : 0 pts	FALSE ANSWER: -2 pts
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6.1. Ace is 4 centimeters taller than Bobby, Cico is 8 centimeters taller Dudo, and Bobby is 2 centimeters shorter than Cico. How many centimeters is Dudo shorter than Ace?

A. 10 cm	B. 12 cm	C. 8 cm	D. Can't be determined	E. We don't want to answer
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6.2. Continue the sequence: 1, 3, 7, 15, 31...

A. 47	B. 63	C. 57	D. 53	E. We don't want to answer
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6.3. A Rubiks cube is made up of $3 \times 3 \times 3 = 27$ little blocks and each side is colored a different color. How many little blocks are colored with exactly two colors?



A. 12	B. 24	C. 8	D. Can't be determined	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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6.4. What number is $1 + \frac{1}{2} \cdot \left(1 + \frac{1}{2} \cdot \left(1 + \frac{1}{2} \cdot \left(1 + \frac{1}{2} \right) \right) \right)$?

A. $\frac{31}{16}$	B. $\frac{45}{16}$	C. $\frac{81}{16}$	D. None of the above	E. We don't want to answer
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6.5. In an isosceles triangle the angle between the angle bisectors at the base is 136° . What is the angle between the legs of the triangle?

A. 68°	B. 88°	C. 92°	D. Such triangle doesn't exist	E. We don't want to answer
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6.6. A bag with books has a mass of 7.5kg. The mass of the books is five times bigger than the mass of the bag. If we don't bring one fifth of books to school, what will be the mass of the bag with the books.

A. 5.75 kg	B. 6 kg	C. 6.5 kg	D. 6.25 kg	E. We don't want to answer
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6.7. What is the sum of digits of the smallest four digit natural number that is divisible by 2, 3, 4 i 5?

A. 4	B. 3	C. 9	D. Can't be determined	E. We don't want to answer
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Correct answer: 30 points

Answer „E“: 0 points

False answer: -6 points

6.8. When we divide 140 and 188 with the same number they give the same remainder. How many numbers are there that fit the description?

A. 7	B. 8	C. 10	D. 11	E. We don't want to answer
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6.9. If in the sequence 1, 2, 3, ..., 99, 100 we delete all even numbers and all numbers divisible by 3, in what place will the number 97 be?

A. 33	B. 17	C. 29	D. None od the above	E. We don't want to answer
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6.10. Jurica paid $\frac{1}{2}$ of his pocket money for the birthday present for his friend. For the tram ticket he spent $\frac{1}{10}$ pf what left. On his way he paid $\frac{1}{8}$ from the rest for the icecream. When he got home, he had 63 kn left. What was the price of the present?

A. 160 kn	B. 80 kn	C. 90 kn	D. Can't be determined	E. We don't want to answer
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6.11. From how many little triangles with 1 centimeter sides is a big triangle with a side of 55 centimeters consisted of?



A. 1540	B. 2969	C. 2970	D. 3025	E. We don't want to answer
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6.12. If we shorten one side of a square by 3 centimeter and the other one by 5 cm the rectangle will have an area 65 cm² smaller than before. What is the perimeter of the rectangle?

A. 12 cm	B. 20 cm	C. 24 cm	D. Can't be determined	E. We don't want to answer
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6.13. 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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6.14. 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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6.15. 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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