



Spring Round 2019./2020.

SCHOOL	
TEAM NUMBER	
CATEGORY	Year 5
COMPETITION COMMISSIONER	

NO.	FIRST AND LAST NAME OF PARTICIPANT	YEAR	FIRST AND LAST NAME OF MENTOR
1.			
2.			

ANSWERS:

Year 5					
5.1.		5.4.		5.8.	
5.2.		5.5.		5.9.	
5.3.		5.6.		5.10.	
		5.7.		5.11.	
				5.12.	
				5.13.	
				5.14.	
				5.15.	

I ♥ **MAT**ematika

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CORRECT ANSWER: 10 POINTS**ANSWER „E“: 0 POINTS****ELSE: -2 POINTS**

5.1. The symbols \bullet , \blacktriangledown and \blacklozenge represent natural numbers different from number 1. What is the value of \blacktriangledown if the following equations are true:

$$\bullet \times \blacktriangledown = 80 \quad \text{and} \quad \bullet \times \blacklozenge \times \blacklozenge = 50?$$

A. 40	B. 20	C. 10	D. It cannot be determined.	E. We do not wish to answer.
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5.2. Points M , N , O and P are on the same line. What is the distance between points O and N if we know that:

- the distance between points O and M is 14 units
- the distance between points O and P is 17 units
- the points O and P are on different sides of point M on the line
- the distance between points N and M is 10 units
- the distance between points P and N is 13 units

A. 24 units	B. 4 units	C. 7 units	D. It cannot be determined.	E. We do not wish to answer.
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5.3. What is the type of the smaller angle that the small and big hand of the clock form at 15:30?

A. Right	B. Acute	C. Obtuse	D. Half-turn	E. We do not wish to answer.
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CORRECT ANSWER: 20 POINTS**ANSWER „E“: 0 POINTS****ELSE: -4 POINTS**

5.4. How many three-digit numbers less than 500 such that the product of their digits is 8 are there?

A. 8	B. 6	C. 9	D. 7	E. We do not wish to answer.
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5.5. How many times did Robert write the digit 3 if he has written all the numbers from 13 to 130:

13, 14, 15, ..., 128, 129, 130.

A. 20	B. 21	C. 22	D. 23	E. We do not wish to answer.
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5.6. There 5 times as many apples in the first basket as in the second basket. What is the difference of the numbers of apples in the baskets, if there are 300 apples in total in both baskets?

A.	B.	C.	D.	E.
100	200	240	300	We do not wish to answer.

5.7. On the right side of the street there is a row of birch trees at equal distances of 5 metres from each other, and on the left side of the street there is a row of oak trees at distances of 4 metres from each other. What is the total length of both rows of trees if there are 72 birch trees and 91 oak trees?

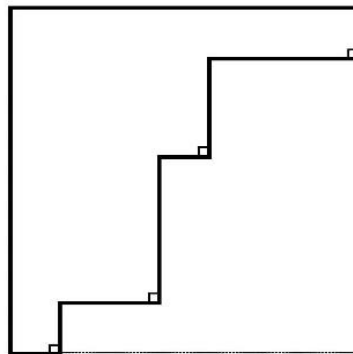
A.	B.	C.	D.	E.
710 m	720 m	724 m	715 m	We do not wish to answer.

CORRECT ANSWER: 30 POINTS

ANSWER „E“: 0 POINTS

ELSE: -6 POINTS

5.8. What is the perimeter of the shown figure that has been cut from a square with the area equal to 196 cm^2 ?



A.	B.	C.	D.	E.
28 cm	14 cm	56 cm	It cannot be determined.	We do not wish to answer.

5.9. The Matic family wanted to buy a present for the children of friends whom they are visiting. Two chocolate bars and a box of chocolate cost 90 kn, and two boxes of cookies and a box of chocolates cost 94 kn. What is the cost of a box of cookies, a box of chocolates and a chocolate bar, altogether?

A.	B.	C.	D.	E.
91 kn	92 kn	93 kn	It cannot be determined.	We do not wish to answer.

5.10. Calculate $(20 \times 50 - 81 \times 8) \times (13 - 3 \times 4) + (11 \times 5 \times 13 - 7 \times 55) - (8 \times 90 - 40 \times 9) - (5 + (125 - 5) \div 6)$.

A.	B.	C.	D.	E.
12	297	20	270	We do not wish to answer.

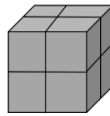
5.11. Out of 24 students in Year 5, five of them were absent on Friday. 13 of them got a 5 from guided reading, and 16 of them got a 5 from obstacle jumping. How many of the students got two 5s that day: from guided reading and obstacle jumping?

A. 5	B. 10	C. 13	D. It cannot be determined.	E. We do not wish to answer.
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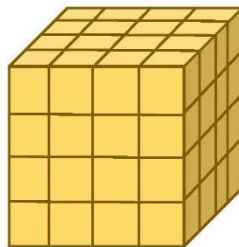
5.12. A square is intersected by two perpendicular lines and divided into two pairs of equal rectangles. The area of one smaller rectangle is 5 times smaller than the area of one bigger rectangle. What is the perimeter of the given square if the perimeters of the greater and the smaller rectangle have a difference of 120 cm?

A. Less than 300 cm	B. between 300 cm and 400 cm	C. between 400 cm and 500 cm	D. Greater than 500 cm	E. We do not wish to answer.
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5.13. Ivica made a cube using 8 grey cubes, as shown:



After that, he built around the grey cube using yellow cubes and the resulting cube is shown:



How many yellow cubes did he use?

A. 64	B. 96	C. 56	D. 88	E. We do not wish to answer.
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5.14. Leo decided to climb to the top of Medvednica twice during the work week (from Monday to Friday). If he can do this twice in one day, or on two different days, how many different choices of days to go climbing does he have?

A. 5	B. 10	C. 15	D. 20	E. We do not wish to answer.
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5.15. Jerry made triangles and quadrilaterals from paper, and they have altogether 38 vertices. If there are fewer triangles than quadrilaterals, how many quadrilaterals are there?

A. 6	B. 5	C. 8	D. It cannot be determined.	E. We do not wish to answer.
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