

## Spring Round 2019./2020.

| SCHOOL |  |
| :---: | :--- |
| TEAM NUMBER |  |
| CATEGORY |  |
| COMPETITION |  |
| COMISSIONER |  |


| NO. | FIRST AND LAST NAME OF <br> PARTICIPANT | YEAR | FIRST AND LAST NAME OF <br> MENTOR |
| :---: | :---: | :---: | :---: |
| 1. |  |  |  |
| 2. |  |  |  |

## ANSWERS:

| Year 4 |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| 4.1. | 4.6. |  | 4.13. |  |
| 4.2. | 4.7. |  | 4.14. |  |
| 4.3. | 4.8. |  | 4.15. |  |
|  | 4.9. |  | 4.16. |  |
|  |  | 4.17. |  |  |
|  |  | 4.18. |  |  |
|  | 4.19. |  |  |  |
|  |  | 4.20. |  |  |

## I MATematika

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## CORRECT ANSWER: 10 POINTS ANSWER „E": 0 POINTS

4.1. Two intersecting lines divide the plane into:

| A. | B. | C. | D. | E. <br> two parts | We do not wish <br> to answer. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

4.2. How many three-digit numbers are there such that the sum of their digits is 3 ?

| A. | B. | C. | D. | E.We do not wish <br> to answer. <br> 6 |  | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

4.3. Tim and Tom decided to solve 40 mathematical problems together. After Tim solved 7, and Tom solved 3, the remaining problems were shared equally. How many problems did Tom solve?

| A. | B. | C. | D. | E. <br> We do not wish <br> to answer. |
| :--- | :--- | :--- | :--- | :--- | :--- |

## CORRECT ANSWER: 20 POINTS $\quad$ ANSWER ,EE": 0 POINTS $\quad$ ELSE:-4 POINTS

4.6. What is the type of the smaller angle that the small and big hand of the clock form at 15:30?

| A. <br> Right | B. <br> Acute | C. <br> Obtuse | D. <br> Half-turn | E. We do not wish to answer. |
| :---: | :---: | :---: | :---: | :---: |

4.7. How many triangles can you draw with vertices in points $A, B, C, D$ or $S$ ?


| A. | B. | C. | D. | E. <br> We do not wish <br> to answer. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

4.8. Victoria visits her grandma each Sunday that falls on an even date. If January 1 st was a Wednesday, and today is February 19th, How many times did Victoria visit grandma this year?

| A. | B. | C. | D. | E.We do not wish <br> to answer. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

4.9. Every three months, the tree in frontof Ivas house grows by 8 cm . If it is 123 cm tall now, how tall will it be in 2 years?

| A. | B. | C. | D. | E. | We do not wish <br> to answer. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## CORRECT ANSWER: 30 POINTS $\quad$ ANSWER ,E" $\mathbf{E}$ : 0 POINTS $\quad$ ELSE: -6 POINTS

4.13. Marta i Ana čekaju u redu za kupnju ulaznica. Marta je stala u red prije Ane pa je sada ispred Marte 15 ljudi, a između Marte i Ane dvoje ljudi u redu. Ako je iza Ane 10 ljudi, koliko je ukupno ljudi u redu?

| A. 27 | B. | C. | D. | E.We do not wish <br> to answer. |
| :--- | :--- | :--- | :--- | :--- | :--- |

4.14. 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. | B. | C. | D. | E. <br> It cannot be <br> determined. | We do not wish <br> to answer. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

4.15. What is the value of $\nabla$, if none of the symbols is equal to 1 and the following is true:


| A. | B. | C. | D. | E. <br>  | 20 | We do not wish <br> It cannot be <br> determined. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

4.16. 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. We do not wish |
| :---: | :---: | :---: | :---: | :---: |
| 710 m | 720 m | 724 m | 715 m | to answer. |

4.17. Steve and George started their journey from Split to Zagreb at the same time. Steve drove a car and covered 90 km in one hour, and George took the bus that covered 75 km in one hour. After and hour of driving Steve stopped for 10 min at a gas station, and the bus spent 10 minutes at the rest stop. At which distance from each other were Steve and George 3 hours after they started the journey?
$\left.\begin{array}{|l|l|l|l|l|}\hline \text { A. } & \text { B. } & \text { C. } & \text { D. } & \begin{array}{l}\text { E. } \\ \text { less than } 45 \mathrm{~km} \\ \text { Iteater than } 45 \mathrm{~km} \\ \text { It cannot be } \\ \text { determined. }\end{array}\end{array} \begin{array}{l}\text { We do not wish } \\ \text { to answer. }\end{array}\right\}$
4.18. Mary has 18 carrots and she wants to give them to her bunnies. If Mary has 4 bunnies (Miki, Tiki, Siki, and Ziki), and wants to give each at least 3 carrots and at most 5 carrots, in how many ways can she give all 18 carrots to her bunnies?

| A. | B. | C. | D. | E.We do not wish <br> None of the <br> aforementioned | to answer. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

4.19. Mum went to the market and bought 3 kg of apples and 3 kg of potatoes and she paid $27,00 \mathrm{kn}$ for that. If a kilogram of apples costs 3 kn more than a kilogram of potatoes, how many kuna would she pay for 2 kg of apples and 3 kg of potatoes?

| A. | B. | C. | D. | E. We do not wish |
| :---: | :---: | :---: | :---: | :---: |
| 20 | 18 | 24 | 21 | to answer. |

4.20. Grandma Mary and her granddaughter Jan are peeling potatoes and placing them in a bowl. Grandma places 12 potatoes every 5 minutes, and her granddaughter Jan places 5 peeled potatoes every 3 minutes. After how much time will there be at least 40 nut not more than 45 potatoes in the bowl?

| A. | B. | C. | D. | E. <br> 12 minutes | We do not wish <br> to answer. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

