Example RT#003
Recruitment Test – Maths and Logic

Allotted Time: 60 minutes

Please read the following instructions very carefully before starting the test.

1. Print your name at the top of this page.
2. Answer **all** questions **in this test**, and do not use any red ink.
3. Do not remove the staples; if you need more space for calculations or notes, use the back of the preceding page.
4. For the correct answer you will receive the number of points indicated in the shaded boxes to the right of each question.
5. Please note that a comma is used as the decimal separator in all decimal numbers and a point is used as a thousand separators.
6. The points are distributed according to the time you should need for every exercise.

NO CALCULATORS	NO MOBILE PHONES	NO BOOKS OR NOTES

Page	2	3	4	Total
Questions	1 - 5	6 - 10	11 – 15	**1 – 15**
Max no. of points	21	19	20	**60**
Points received				

1. Transform **the percentages into** fractions, cancelling **all common factors**.

(2 pts. for each correct answer = 6 pts.)

   a) $0,085\% =$

   b) $175\% =$

   c) $1,25\% =$

2. Calculate the expression and show the result as a **decimal**.

(2 pts. for each correct answer = 4 pts.)

   a) $\dfrac{8}{150} \div \left(\dfrac{7}{18} \cdot \dfrac{24}{35} \right) =$

   b) $\dfrac{0,4 \cdot 5,2}{9,24 - 3} =$

3. **Perform** the operations and give the result as a **fraction**.

(2 pts. for each correct answer = 4 pts.)

   a) $\dfrac{1}{5} - \left(-\dfrac{1}{12} + \dfrac{4}{3} \right) =$

   b) $3,6 + \dfrac{6 + \frac{1}{2}}{2,6} =$

4. The numbers in the following schemata are filled in according to a certain system.

Complete the schema by filling in the shaded fields.

(2 pts. for each correct answer = 4 pts.)

60	20	40
72	24	48
87	29	
42		28

5. John is 3 years older than Anna. **How old are they** if the sum of their ages is 75?

(3 pts. for the answer = 3 pts.)

_____

Sum of points on page #2

6. **How many pets** do I keep in my house? All pets are dogs except of two, all are cats except of two, and all are parrots except of two.

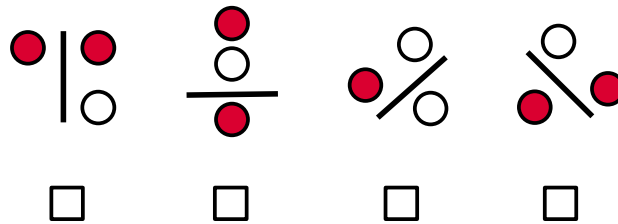**(4 pts. for the answer = 4 pts.)**

7. **Calculate the values** due to the given percentages.

(2 pts. for each correct answer = 4 pts.)

   a)   18% of 4 million EUR   →

   b)   2,1% of 1.600 km   →

8. Which figure does not fit into this picture? **Tick** the corresponding box. [8.83]

(3 pts. for the correct answer = 3 pts.)

☐   ☐   ☐   ☐

9. A green painted wooden cube of 20 cm edge length will be cut into dice with each getting the edge length of 10 cm.

(2 pts. for each correct answer = 4 pts.)

   a)   How many dice will be generated?
   b)   How many square areas have to be painted such that the new dice are again completely green?

10. You planted a tree in your garden which is 250 cm high. We assume that the tree is growing 8% annually. **How high will the tree** be after …

(2 pts. for each correct answer = 4 pts.)

   a)   1 year
   b)   3 months

Sum of points on page #3

11. **Calculate the final price** of the dress which was originally priced out with 120 EUR. The price was reduced once by 15% and for a special sale another times by 10%.

(4 pts. for the correct answer = 4 pts.)

12. **Complete** the logical sequence of numbers. **Tick** the correct answer.

(2 pts. for each correct answer = 4 pts.)

a)   3; 5; 9; 17; 33; ___

    ◯ 55   ◯ 60   ◯ 65   ◯ 54
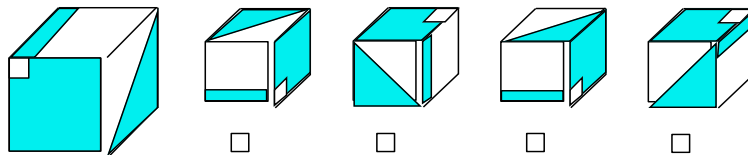
b)   6; 7; ___ ; 12; 16

    ◯ 8   ◯ 9   ◯ 11   ◯ 10

13. A cashier working alone serves 20 clients in 1 hour. A second cashier serves the same number of persons in 40 minutes. **What time** will they need serving the 20 clients if they work both?

(4 pts. for the correct answer = 4 pts.)

14. One of the presented small dice is identical with the given big cube. Find it by comparing the visible sides and tick it.

(4 pts. for the correct answer = 4 pts.)

☐   ☐   ☐   ☐

15. **Find the solution** of the following system of equations.

(4 pts. for the correct answer = 4 pts.)

$-2x + 3y = 14$ (1)
$5x - 4y = -21$ (2)

Sum of points on page #4