

Maths and Logic: Recruitment Test # 3

- 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 write **beyond the bar** on the right border.
 4. Do not remove the staples; if you need more space for calculations or notes, use the back of the preceding page.
 5. For the correct answer you will receive the number of points indicated at the right hand side of each question.
 6. Please note that a comma is used as the decimal separator in all decimal numbers and a point is used as thousand separators.
 7. The points are assigned according to the time you should approximately need for each question.

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 given percentages into **fractions** and **cancel out all** common factors.

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

a) $0,085\% =$

b) $175\% =$

c) $1,25\% =$

2. Calculate the expressions and give the result in **decimals**.

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

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

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

3. **Calculate** the values of the given expressions and give the result as a **fraction**:

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

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

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

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

Complete the table by filling in the **empty fields**.

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

60	20	40
72	24	48
87	29	
42		28

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

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

_____ Total points on this page #2



6. **How many** pets do I have? All my pets but two are dogs, all of them but two are cats, and all of them but two are parrots.

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

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

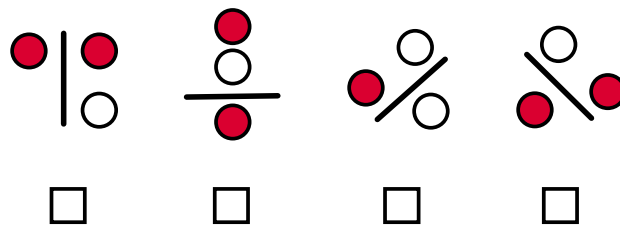
(2 pts. for each correct answer = 4 pts.)

a) 18% of 4 million EUR →

b) 2,1% of 1.600 km →

8. Which figure does not belong to the picture? **Thick** the box below it.

(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.

- 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?

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

10. You have planted a tree in your garden, which is 250 cm high. Assume that that the tree grows 8% annually. **How high** will be your tree after ...

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

- a) 1 year
 b) 3 months

Total points on this page #3



11. A dress costs now 120 EUR. Calculate its new price, if during a sale, the current price was once decreased by 15% and then again by 10% . .

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

12. Find the missing number in the sequence. Tick the right answer.

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

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

- 55 60 65 54

b) 6; 7; ____ ; 12; 16; 21

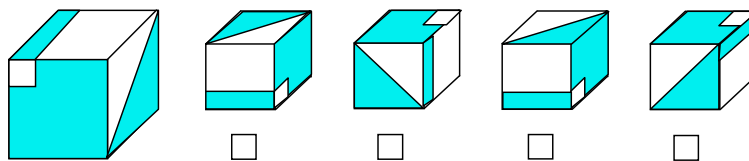
- 8 9 11 10

13. A cashier serves 20 clients an hour if he works alone.. Another cashier serves the same number of people for 40 minutes. **How much time** would it take both of them to serve 20 clients if they worked together?

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

14. One of the smaller cubes is the same as the big one given on the left. Find it by comparing the visible sides and tick the box below it.

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



15. Solve the system of equations.

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

$$-2x + 3y = 14 \quad (1)$$

$$5x - 4y = -21 \quad (2)$$



Answers:

1.

a) $\frac{17}{20000}$

b) $\frac{7}{4}$

c) $\frac{1}{80}$

2.

a) 0,2

b) 0,33

3.

a) $-\frac{21}{20}$

b) $\frac{61}{10}$

4.

60	20	40
72	24	48
87	29	58
42	14	28

5. John is 39 years old, Anna is 36.

6. 3 pets.

7.

a) 720.000 EUR

b) 33,6 km

8.



9. 8 smaller cubes and 24 walls to be painted.

10.

a) 270 cm

b) 255 cm

11. 91,80 EUR

12.

a) 65

b) 9

13. 24 minutes

14.

15. $x = -1, y = 4$