



(Name Surname)

Maths-0 Test: for Recruitments

*** **Allotted Time: 60 minutes**

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

1. Write 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 open the staples; if you need more space for calculations or notes, use the back of the preceding page to the left of the question you are working on.
4. For the correct answer you will get the marks 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.

NO CALCULATOR

NO MOBILE PHONE

NO BOOKS OR NOTES

Page/Max.	2/5	3/5	4/5	5/5	All/50
Total Points					

1. Transform into **decimal numbers**:

a) $1,5\% = 0,015$

2	
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b) $3/15 = 0,2$

2	
---	--

2. Add or subtract as appropriate, and give the **result as a fraction**:

a) $\frac{3}{4} + \frac{5}{2} * (-3) = -\frac{27}{4}$

2	
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b) $\frac{11}{5} - 5 = -\frac{14}{5}$

2	
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3. Multiply the fractions, and give the result as a decimal:

a) $\frac{-12}{5} * \frac{2}{-9} = 0,5333$

2	
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b) $0,5 * \frac{3}{-8} = -0,1875$

2	
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4. For numbers a, b and c following inequalities hold true: $a > b$ (a is greater than b) and $b < c$ (b is less than c). which other inequality can be deduced from this information?

$a > c$

$a < c$

neither

3	
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5. Divide, giving the result as a **fraction**:

3

$$-\frac{1-\frac{1}{4}}{6} = -\frac{1}{8}$$

6. Divide, cancelling out all **common factors**:

3

$$-\frac{1-\frac{13}{16}}{\frac{15}{24}} = -\frac{3}{10}$$

7. Calculate the **value** of the expression:

3

$$\frac{-(4-2)}{\left[\frac{2*3-2*6}{3} - 7 \right]} = 2$$

8. Which of the following numbers continues the number sequence correctly? Mark one of the answer offered:

- a) 2; 4; 8; 16 ?
 - 32 - 8 - 4 - 64

3

- b) 9; 8; 10; 9; 11; 10 ?
 - 11 - 16 - 12 - 14

3

9. You are in a cycle race and are about to pass the rider who is currently lying in second position. What will your position in the race be after you have passed him?

second

4	
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10. Express the following portions in **percentages**:

a) 45 out of 135 \rightarrow 33,33%

2	
---	--

b) 0,6 out of 5 \rightarrow 12%

2	
---	--

11. **Calculate the values** corresponding to the given percentages:

a) 0,6% of 800 clients \rightarrow 4,8

2	
---	--

b) 200% increase starting from 55 \rightarrow 165

2	
---	--

12. Calculate the **net price** (without tax), if the gross price (20% tax included) is 96 EUR

80 EUR

3	
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13. Calculate the **new price** after the old price of 60 EUR has been increased by 15%.

69 EUR

2

14. A truck travels at 80 km/h (kilometres per hour). How far will it travel in 36 minutes?

48 km

4

15. The numbers in the following schemata are filled in according to a certain system. Complete the schema by filling in the last empty field:

a.

7	10	13
5	8	11
3	6	9

2

b.

40	25	10
32	17	2
24	9	-6

3

16. Find the **solution** to the following system of equations:

$$\begin{cases} 2x + 3y = 7 \\ -x + 4y = 2 \end{cases}$$

$$x=2, y=1$$