

## Maths and Logic: Recruitment Test # 2

**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
<b>Questions</b>	1 - 5	6-10	11-15	<b>1 - 15</b>
<b>Max no. of points</b>	24	15	21	<b>60</b>
<b>Points received</b>				

1. Transform the percentages into **decimal numbers**:

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

a)  $0,05\% =$

b)  $\frac{51,4}{200} =$

c)  $\frac{36\%}{0,6} =$

2. Peter has three times more oranges than John. Together they have 48 oranges. **How many oranges does each of them have?**

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

3. Transform the following expressions into **fractions**:

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

a)  $-\frac{7}{5} - (-2) \cdot \frac{5}{6} =$

b)  $5 + \frac{1}{5} - \frac{36}{24} =$

c)  $\frac{21}{9} + \frac{1}{7} - \frac{24}{42} =$

4. You can feed 6 puppies or 2 dogs with 1 can of food. If you have 10 cans and you fed 21 puppies, **how many dogs** can you feed with the rest of the food?

(5 pts. for the correct answer = 5 pts.)

5. Transform the following expressions into **fractions**:

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

a)  $\frac{3}{4} + \frac{1}{6} \cdot (-7) =$

b)  $\frac{12}{7} - 2 + \frac{2}{3} =$

**Total points on this page #2**



6. Your house measures  $20 \text{ m} \times 9 \text{ m}$ . You want to build a rectangular fence around it at a distance of 3 m from each sides of the house.

**How many meters** of fence would you need?

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

7. Calculate the value of the given expression and give the result as a fraction:

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

$$\frac{-2 - \frac{1}{3} + \frac{2}{4}}{\frac{11}{4}} =$$

8. Calculate the value of the expression, cancelling out all common factors:

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

$$\frac{18}{35} \div \frac{9}{21} \div \frac{12}{25} =$$

9. **Peter** is father of **Maria**. *Maria* is niece of *Anna*. *Anna* is daughter of *Paul*. **Which** of the following is true?

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

- Paul* is Peter's son
- Anna* is Peter's aunt
- Paul* is *Maria*'s grandfather
- Anna* and *Maria* are cousins

10. Calculate the value of the expression:

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

$$\left[ \frac{2 \cdot (3-4)^2 - 3 \cdot (2-4)^2}{5} - \sqrt{4} \right] \cdot 8 - 5 =$$

**Total points on this page #3**



11. Calculate the proportions in **percentages**:

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

- a) 44 of 40000 →
- b) 9000 of 100 thousand →

12. Finish the logical sequence of letters. **Tick** the right answer:

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

a) aj; bl; cn; dp?

- eq                       er                       fr                       fq

b) e; b; g; d; i; f; k; h ?

- f                       l                       k                       m

13. Calculate the values corresponding to the given percentages:

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

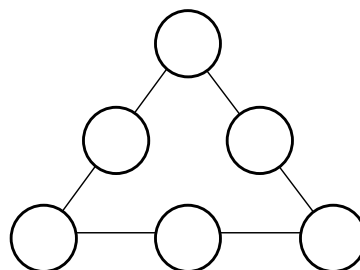
- a) 0,8% of \$ 5 million →
- b) 12% of 2.400 clients →

14. Calculate the value of an investment of \$ 4.000 after two years if every year it increases by 3%.

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

15. **Fill in** the circles with the numbers **from 1 to 6** (without repetition) so that the sum of every side of the triangle is 9.

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



Total points on this page #4

**Answers:**

1.
  - a) 0,0005
  - b) 0,257
  - c) 0,6
2. Peter has 36 oranges, John has 12.
3.
  - a)  $\frac{4}{15}$
  - b)  $\frac{37}{10}$
  - c)  $\frac{40}{21}$
4. You can feed 13 dogs.
5.
  - a)  $-\frac{5}{12}$
  - b)  $\frac{8}{21}$
6. You need 82 meters of fence.
7.  $-\frac{2}{3}$
8.  $\frac{5}{2}$
9. Paul is Maria's grandfather.
10. -37
11.
  - a) 0,11%
  - b) 9%
12. .
  - a) er
  - b) m
13.
  - a) \$ 40.000
  - b) 288 clients
14. 4.243,60 EUR
- 15.

