



Project number: 2018-11T02KA201048274

*QUESTIONNAIRE B1*

Name: \_\_\_\_\_

Year/class: \_\_\_\_\_ Gender (M/F): \_\_\_\_\_ Date: \_\_\_\_\_

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This questionnaire aims to collect information on students' learning difficulties in mathematics.

**Your answers are very important and the SMiLD team thanks you for your cooperation.**

For each multiple-choice entry, mark the correct answer with an X. For other questions, please show your reasoning

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1.  $\frac{3}{5} + \left(\frac{3}{10} \times \frac{4}{15}\right) =$

- a)  $\frac{3}{51}$       b)  $\frac{1}{6}$       c)  $\frac{6}{25}$       d)  $\frac{11}{25}$       e)  $\frac{17}{25}$

2.  $370 \times 998 + 370 \times 2 =$

- a)  $370 \times 1000$       b)  $372 \times 998$       c)  $740 \times 998$       d)  $370 \times 998 \times 2$

3. At a play,  $\frac{3}{25}$  of the people in the audience were children.  
What percentage of the audience were children?

4. In which list were the numbers sorted from largest to smallest?

- a) 0.233 — 0.3 — 0.32 — 0.332      c) 0.32 — 0.233 — 0.332 — 0.3  
b) 0.3 — 0.32 — 0.332 — 0.233      d) 0.332 — 0.32 — 0.3 — 0.233

5. Two-thirds of the people present at the beginning of a meeting are men. No one leaves, but 10 other men and 10 other women are added. Which of the following statements is true?

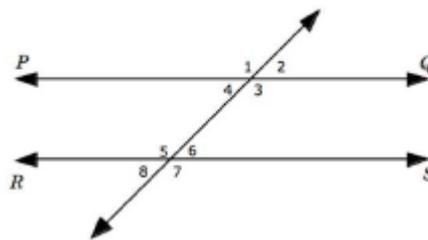
- a) The meeting is attended by more men than women.  
b) The meeting is attended by the same number of men and women.  
c) The meeting is attended by more women than men.  
d) With the information given, it is not possible to determine whether there are more women than men.



6. John and Cathy have to divide a number by 100. By error John multiplies the number by 100 and gets 450. Cathy, on the other hand, correctly divides the number by 100. What value does Cathy find?

- a) 0.0045      b) 0.045      c) 0.45      d) 4.5

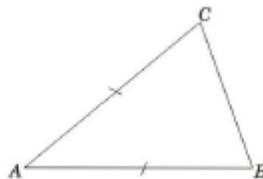
7. In the figure, PQ and RS are parallel.



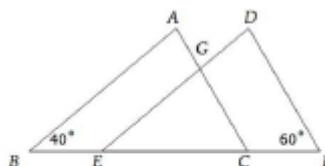
The two corners, whose sum is  $180^\circ$ , are:

- a) corner 5 and corner 7.      b) corner 3 and corner 6.      c) corner 1 and corner 7.  
 d) l'angolo 2 e l'angolo 8.      e) corner 2 and corner 8

8. The triangle ABC has  $AB=AC$ . Draw a segment to divide triangle ABC into two congruent triangles.

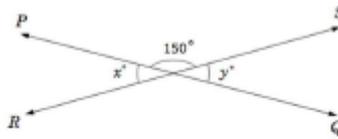


9. In the figure the triangle ABC and DEF are congruent with  $BC=EF$ . What is the size of the EGC angle?



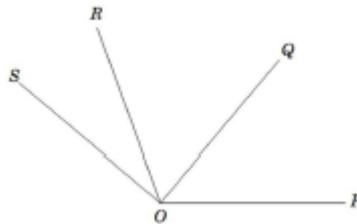
- a)  $20^\circ$       b)  $40^\circ$       c)  $60^\circ$       d)  $80^\circ$       e)  $100^\circ$

10. In the figure, PQ and RS are two straight accidents. What is the value of  $x + y$ ?



- a) 15      b) 30      c) 60      d) 180      e) 300

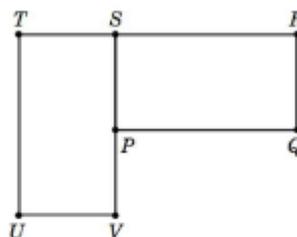
11. In the figure, the measure of  $\angle POR$  is  $110^\circ$ . The measure of  $\angle QOS$  is  $90^\circ$  and the measure of  $\angle P OS$  is  $140^\circ$ .



What is the  $\angle QOR$  measurement?

**Answer:**

12. With one rotation the rectangle PQRS can be superimposed on the UVST rectangle. Which point is the center of rotation?



- a) P      b) R      c) S      d) T      e) V



13. If  $l = 4$  when  $k = 6$  and  $m = 24$ , which of the following expressions is true?

a)  $L = \frac{M}{K}$     b)  $L = \frac{K}{M}$     c)  $L = KM$     d)  $L = K + M$     e)  $L = M - K$

14. If  $x = -3$ , what is the value of  $-3x$ ?

a)  $-9$     b)  $-6$     c)  $-1$     d)  $1$     e)  $9$

15. Andrew has twice as many books as Robert. Marc has six more books than Robert. If  $x$  indicates the number of Robert's books, which of the following expressions represents the total number of books that the three kids have?

a)  $3x + 6$     b)  $3x + 8$     c)  $4x + 6$     d)  $5x + 6$     e)  $8x + 2$

16. Carla spends  $x$  zed to buy 3 bottles of juice. What is the zed price of 1 bottle of fruit juice?

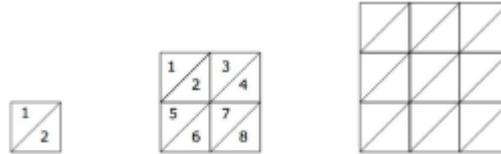
a)  $\frac{x}{3}$     b)  $\frac{3}{x}$     c)  $3 + x$     d)  $3x$

17. If  $a + 2b = 5$  and  $c = 3$ , what is the value of  $a + 2(b + c)$ ?

**Answer:**



18. The following three figures are divided into congruent triangles.



- a) Please complete the following table. First, indicate how many trinkets co-replace Figure 3. Then find the number of triangles that are needed for a fourth figure if you extend the succession of figures.

Figura	1	2	3	4
Triângulos pequenos	2	8		

- b) The succession is extended to the seventh figure. How many trinkets would be required for the seventh figure?

**Answer:**

- c) The succession is extended to the fiftieth figure. Explain how you can calculate the number of triangles of the fiftieth figure without drawing it and without counting the number of triangles.

**Answer:**