

CRITERIOS ESPECÍFICOS DE CORRECCIÓN

OPTION A: BILINGUAL PEOPLE PROCESS MATHS DIFFERENTLY DEPENDING ON THE LANGUAGE **KEY**

1 A new study has found that people who speak more than one language fluently will process maths differently depending on
2 the language that they use. Intuition enables the brain to recognise numbers up to four. However, when calculating mathematical
3 problems, we depend on language. This led researchers at the University of Luxembourg to explore just how arithmetic skills are
4 affected when bilingual people use different languages.

5 The authors of the study selected students in francophone universities in Belgium whose mother tongue was Luxembourgish
6 —a dialect of German. They were therefore fluent in both German and French. In two different test situations, participants were
7 asked to solve a mixture of simple and complex maths problems in both languages. They were able to solve the simple tasks
8 equally well in both languages. However, they took longer to calculate complex tasks in French than in German. Furthermore, they
9 made fewer errors in their mother tongue.

10 The students' brain activity was measured by magnetic resonance scanning techniques and the results showed that different
11 regions of the brain were in use when the participants were solving problems in different languages. For example, when solving
12 the simple task in German, a small section of the left temporal lobe was activated. However, the part of the brain that processed
13 visual information became active while doing the complex tasks in French. So researchers concluded that students had to make
14 an "extra effort" to solve mathematical problems in their non-native tongue.

15 "The research results clearly show that calculatory processes are directly affected by language," the authors wrote. They noted
16 that this evidence will gain importance in the next few decades thanks to growing migration and an increasingly globalised job
17 market.

I * COMPREHENSION (4 points)

CHOOSE AND WRITE THE CORRECT OPTION (A, B, C or D). (0.5 points each)

1. The experiment was designed and carried out by...

- (a) analysts from a European university. (b) people who had migrated to another country to find a job.
(c) analysts working for a Belgian company. (d) bilingual students from Belgium and Luxembourg.

2. The participants in the experiment...

- (a) had to use intuition to recognise numbers in two languages. (b) had to solve one problem in French and another in German.
(c) had to solve several problems only in German. (d) had to use French and German to solve a number of problems.

ARE THESE STATEMENTS TRUE OR FALSE? JUSTIFY YOUR ANSWERS WITH THE PRECISE WORDS OR PHRASES FROM THE TEXT, OR USE YOUR OWN WORDS. (0.5 points each)

3. The students taking part in the experiment spoke French as their native language. **FALSE** (lines 5-6) "*The authors of the study selected students in francophone universities in Belgium whose mother tongue was Luxembourgish (—a dialect of German).*"

4. Students had to solve mathematical problems of different levels of complexity. **TRUE** (lines 6-7) "*In two different test situations, participants were asked to solve a mixture of simple and complex maths problems in both languages.*"

5. Advanced technological equipment was employed in the experiment. **TRUE** (line 10) "*The students' brain activity was measured by magnetic resonance scanning techniques.*"

6. The conclusions of the experiment will be more significant in the future. **TRUE** (line 16) "*... this evidence will gain importance in due course (thanks to growing migration and an increasingly globalised job market).*"

7. FIND IN THE TEXT: (0.5 points)

- 7.1. ONE OPPOSITE FOR "prevent" (verb). enable(s) (line 2)
7.2. ONE SYNONYM FOR "combination" (noun). mixture (line 7)

8. FIND IN THE TEXT: (0.5 points)

- 8.1. ONE WORD MEANING "able to speak a foreign language easily and correctly." fluent (line 6)
8.2. THE WORD WHICH HAS THE FOLLOWING DEFINITION: "movement of people to or from another country." migration (line 16)

II * USE OF ENGLISH (3 points; 0.5 points each)

9. FILL IN THE GAPS WITH THE CORRECT OPTION:

- 9.1. "I never know... early I must leave to be there on time." when / so / how / which how
9.2. "Do you remember... was your first maths teacher at secondary school?" whose / that / what / who who

10. FILL IN THE GAPS WITH THE CORRECT WORD:

- 10.1. "I've now stopped worrying so much... (preposition) money." about
10.2. "The experiment dealt... (preposition) the use of renewable energies at school." with

11. GIVE A QUESTION FOR THE UNDERLINED WORDS: "They took ten minutes to solve the problem." How long did they take to solve the problem? / How long did it take them to solve the problem?

12. TURN THE FOLLOWING SENTENCE INTO THE PASSIVE VOICE: "They never tested the bilingual students." The bilingual students were never tested.

13. USE THE WORDS IN THE BOXES TO MAKE A MEANINGFUL SENTENCE. USE ALL AND ONLY THE WORDS IN THE BOXES WITHOUT CHANGING THEIR FORM. I have my hair cut every month. / Every month I have my hair cut.

I	month	my	hair	every	cut	have
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14. COMPLETE THE FOLLOWING (CONDITIONAL) SENTENCE: "If I ever decide to study abroad..." Subject + will...

III * WRITING (3 points)

15. WRITE A COMPOSITION OF APPROXIMATELY 120 WORDS ABOUT THE TOPIC PROPOSED AND FOCUS STRICTLY ON IT:

Do you think that speaking foreign languages is important? Why?