



Bryce Hedstrom

NUMBERS PUZZLES

There are numbers puzzles below in **Spanish** (p. 1-3), **French** (p. 4-6), **Latin** (p. 7-9), **Russian** (p. 10-12), and **German** (p. 13-14) for you to do with your students. These have always worked well in my classes, regardless of the language or age level. They appreciated the challenge, and I liked how thinking about the puzzles forced them to give themselves repetitions in their minds. Puzzles like these also train students to look for patterns, which can help with math and language.

I wrote these in these four languages only because I have a smattering of understanding with each of them. We'll gladly add other languages as they are sent. Thanks to [Michele Whaley](#) for help with Russian, [Lance Piantaginni](#) for help with Latin, and [Eric Richards](#) for the German translation.

Números 0 a 15 Rompecabezas de Números ESPAÑOL

Here are a couple of number puzzles in Spanish.
Use them as content-related brain breaks or as a reward.

I started off using these with my college students. Later, I found that my middle school and high school students enjoyed them too. These are helpful because numbers are often not used enough for students to retain them. We want students to be able to use numbers fluently so we add numbers to every lesson. Using numbers in brain teasers like these gets students to repeat the numbers in their heads as they think about the answer, which is good training and makes them fluent.

The purpose of these puzzles is to:

- Have fun
- Reinforce the numbers
- Give students a brain break
- Use a different part of the brain for a while
- Stay in the target language, even during brain breaks
- Stay content-related, even during brain breaks
- Encourage students to think divergently
- Give everyone a chance, not just the academic super stars
- Set up some friendly competition
- Get students to give themselves repetitions in their own heads.
 - The teacher does not have to supply all of the repetitions to get students to acquire.
 - Students can be put in situations like this and trained to give themselves repetitions.

These puzzles are appropriate for all levels because numbers are abstract and students tend to forget them if we do not purposefully use numbers often.

What makes puzzles like this fun is that all students have a chance of figuring out the answer—not just the academic superstars. Students that think differently will often come up with the answer.

For both of these puzzles students will need to know these number in **Spanish**:

***cero, uno, dos, tres, cuatro, cinco, seis, siete, ocho, nueve, diez,
once, doce, trece, catorce, quince***

Rompecabezas #1

¿Qué es el orden especial de estos números?

Write the numbers one at a time in columns. Do not write out all of the numbers right away. Let the students think and see if they can discover the pattern. Start with just a few numbers. Do not write out all of the numbers right away. Labels for each column using letters can make identification and discussion easier as you add numbers and students begin to guess. They also reinforce the names of letters in Spanish.

A	B	C	D	
2	3	5	4	← <i>It would be almost impossible to figure out the pattern at this point</i>

Keep adding numerals to the puzzle one at a time. Below are all of the numbers from 0-15. You will not need to write so many before some students start to get it.

If they need help, add clues above each column:

					<i>Number of letters in the word →</i>	3	4	5	6	7
A	B	C	D	E		A	B	C	D	E
2	3	5	4	14		2	3	5	4	14
1	6	7	15			1	6	7	15	
	8	9					8	9		
	10	13					10	13		
	11						11			
	12						12			
	0						0			

As students figure it out do not allow them to blurt out the answer. Ask them to raise their hand and prove they know by saying other numbers that would work for the puzzle.

If students need help:

1) Ask what class this is. Ask them if it is math class. Ask if it is English class.

¿Qué clase es esta? ¿Es la clase de matemáticas? ¿Es la clase de inglés?

2) If they need more help, ask the Spanish word for the numbers one at a time.

3) If they still haven't figured it out, write out the word for the numbers as you ask.

Let the students produce the words for the numbers, not you.

4) If they still haven't figured it out, add numbers above the letters—these will correspond to the solution to the puzzle—**the number of letters in Spanish in each word**.

You can also show this little poem and say it aloud to the class:



**Dos tiene tres, si puedes ver.
Y tres tiene cuatro, ¿has observado?
Cuatro tiene seis, ¿Cómo puede ser?
¡Espero que lo hayas adivinado!**

*Two has three, if you can see
And three has four, have you observed?
Four has six, how can it be?
I hope you have guessed it!*

3	4	5	6	7
A	B	C	D	E
dos	tres	cinco	cuatro	catorce
uno	seis	siete	quince	
	ocho	nueve		
	diez	trece		
	once			
	doce			
	cero			

Rompecabezas #2

¿Qué es el orden especial de estos números?

cero, uno, dos, tres, cuatro, cinco, seis, siete, ocho, nueve, diez, once, doce, trece, catorce, quince

14	8
5	11
0	15
4	6
10	7
12	13
2	3
9	1

This puzzle will go much more quickly than the first because students will have the idea that it is a language-based puzzle for a language class, rather than a mathematics puzzle.

Write the numerals slowly and one at a time. Let students figure them out, but when a few students think they know, do not let them blurt out the formula. Let them shine by telling you what the next number will be, one number at a time and one student at a time.

Do not give too much help too soon. If they need help, ask what the numbers are, one at a time. And then write out the word in Spanish. But don't help too much. Don't give away the answer too quickly. Let them figure it out.

14	catorce	8	ocho
5	cinco	11	once
0	cero	15	quince
4	cuatro	6	seis
10	diez	7	siete
12	doce	13	trece
2	dos	3	tres
9	nueve	1	uno

(orden alfabético en español)



Bryce Hedstrom

Casse-tête de nombres

Les nombres 0-15

Français

Here are a couple of number puzzles in **French**.

Use them as content-related brain breaks or as a reward.

I started off using these with my college students. Later, I found that my middle school and high school students enjoyed them too. These are helpful because numbers are often not used enough for students to retain them. We want students to be able to use numbers fluently so we add numbers to every lesson. Using numbers in brain teasers like these gets students to repeat the numbers in their heads as they think about the answer, which is good training and makes them fluent.

The purpose of these puzzles is to:

- Have fun
- Reinforce the numbers
- Give students a brain break
- Use a different part of the brain for a while
- Stay in the target language, even during brain breaks
- Stay content-related, even during brain breaks
- Encourage students to think divergently
- Give everyone a chance, not just the academic super stars
- Set up some friendly competition
- Get students to give themselves repetitions in their own heads.
 - The teacher does not have to supply all of the repetitions to get students to acquire.
 - Students can be put in situations like this and trained to give themselves repetitions.

These puzzles are appropriate for all levels because numbers are abstract and students tend to forget them if we do not purposefully use numbers often.

What makes puzzles like this fun is that all students have a chance of figuring out the answer—not just the academic superstars. Students that think differently will often come up with the answer.

For both of these puzzles students will need to know these number in **French**:

***zéro, un, deux, trois, quatre, cinq, six, sept, huit, neuf, dix,
onze, douze, treize, quatorze, quinze***



Casse-tête #1

Quel est l'ordre spécial de ces numéros ?

Write the numbers one at a time in columns. Do not write out all of the numbers right away. Let the students think and see if they can discover the pattern. Start with just a few numbers. The labels with letters above each column are just to make talking about them easier. They also reinforce the names of letters in French.

Keep writing numerals one at a time.

A	B	C	D	E	F	A	B	C	D	E	F
1	6	2	3	4	14	1	6	2	3	4	14
							10	5	12	13	
								7		15	
								8			
								9			
								11			
								0			

If students need help:

- 1) Ask what class this is. Ask them if it is math class. Ask if it is English class.
- 2) If they need more help, ask the French word for the numbers one at a time.
- 3) If they still haven't figured it out, write out the word for the numbers as you ask.

Let the students produce the words for the numbers, not you.

- 4) If they still haven't figured it out, add numbers above the letters—these will correspond to the solution to the puzzle—the number of letters in French in each word.

2	3	4	5	6	8	← Number of letters in the word
A	B	C	D	E	F	
1	6	2	3	4	14	
	10	5	12	13		
		7		15		
		8				
		9				
		11				
		0				

2	3	4	5	6	8
A	B	C	D	E	F
un	six	deux	trois	quatre	quatorze
	dix	cinq	douze	treize	
		sept		quinze	
		huit			
		neuf			
		onze			
		zéro			



Bryce Hedstrom

Casse-tête #2

Quel est l'ordre spécial de ces numéros ?

5
2
10
12
8
9
11
14
4
15
7
6
13
3
1
0

This puzzle will go much more quickly than the first because students will have the idea that it is a language-based puzzle for a language class., rather than a mathematics puzzle.

Write the numerals slowly and one at a time. Let students figure them out, but when a few students think they know, do not let them blurt out the formula. Let them shine by telling you what the next number will be, one number at a time and one student at a time.

Do not give too much help too soon.

If they need help, ask what the numbers are, one at a time. And then write out the word in Spanish.

But don't help too much. Don't give away the answer too quickly. Let them figure it out.

5	cinq
2	deux
10	dix
12	douze
8	huit
9	neuf
11	onze
14	quatorze
4	quatre
15	quinze
7	sept
6	six
13	treize
3	treize
1	un
0	zéro

(ordre alphabétique en français)



Bryce Hedstrom

Numeri 0-15
Numerus puzzle
Latinus

Here are a couple of number puzzles in **Latin**.
Use them as content-related brain breaks or as a reward.

I started off using these with my college students. Later, I found that my middle school and high school students enjoyed them too. These are helpful because numbers are often not used enough for students to retain them. We want students to be able to use numbers fluently so we add numbers to every lesson. Using numbers in brain teasers like these gets students to repeat the numbers in their heads as they think about the answer, which is good training and makes them fluent.

The purpose of these puzzles is to:

- Have fun
- Reinforce the numbers
- Give students a brain break
- Use a different part of the brain for a while
- Stay in the target language, even during brain breaks
- Stay content-related, even during brain breaks
- Encourage students to think divergently
- Give everyone a chance, not just the academic super stars
- Set up some friendly competition
- Get students to give themselves repetitions in their own heads.
 - The teacher does not have to supply all of the repetitions to get students to acquire.
 - Students can be put in situations like this and trained to give themselves repetitions.

These puzzles are appropriate for all levels because numbers are abstract and students tend to forget them if we do not purposefully use numbers often.

What makes puzzles like this fun is that all students have a chance of figuring out the answer—not just the academic superstars. Students that think differently will often come up with the answer.

For both of these puzzles students will need to know these numbers in **Latin**:

nulla, unus, duo, tres, quattuor, quinque, sex, septem, octo, novem, decem,

undecim, duodecim, tredecim, quattuordecim, quindecim



Puzzle #1

quis est ordo specialis horum numerorum?

Write the numbers one at a time in columns. Do not write out all of the numbers right away. Let the students figure it out. Start with just a few numbers. The labels with letters above each column are just to make talking about them easier. They also reinforce the names of letters in Latin.

A	B	C	D	E	F	G	H
2	1	9	7	5	4	15	14

Keep writing numerals one at a time in the appropriate column.

A	B	C	D	E	F	G	H
2	1	9	7	5	4	15	14
6	3	10		11	12		
	8	0			13		

If they need help,

1) Ask what class this is. Ask them if it is math class. Ask if it is English class. Ask what we are learning here.

quid est hoc? estne haec mathematica? discimus Anglice? quid hic discimus?

2) If they need more help, ask the Latin word for the numbers one at a time.

3) If they still haven't figured it out, write out the word for the numbers as you ask. Let the students produce the words for the numbers, not you.

4) If they still haven't figured it out, add numbers above the letters—these will correspond to the solution to the puzzle—the number of letters in Latin in each word.

<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>13</i>
A	B	C	D	E	F	G	H
2	1	9	7	5	4	15	14
6	3	10		11	12		
	8	0			13		

<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>13</i>
A	B	C	D	E	F	G	H
duo	unus	novem	septem	quinque	quattuor	quindecim	quattuordecim
sex	tres	decem		undecim	duodecim		
	octo	nulla			tredecim		



Puzzle #2

Quis est ordo specialis horum numerorum?

- 10
- 2
- 12
- 9
- 0
- 8
- 4
- 14
- 15
- 5
- 7
- 6
- 13
- 3
- 11
- 1

This puzzle will go more quickly than the first because students will have the idea that it is a language-based puzzle for a language class, rather than a mathematics puzzle.

Write the numerals slowly and one at a time. Let students figure them out, but when a few students think they know, do not let them blurt out the formula. Let them shine by telling you what the next number will be, one number at a time and one student at a time.

Do not give too much help too soon. If they need help, ask what the numbers are, one at a time. And then write out the word in Latin. But don't help too much. Don't give away the answer too quickly. Let them figure it out.

- 10 **decem**
- 2 **duo**
- 12 **duodecim**
- 9 **novem**
- 0 **nulla**
- 8 **octo**
- 4 **quattuor**
- 14 **quattuordecim**
- 15 **quindecim**
- 5 **quinque**
- 7 **septem**
- 6 **sex**
- 13 **tredecim**
- 3 **tres**
- 11 **undecim**
- 1 **unus**

(Ordo alphabeticus Latine)



Bryce Hedstrom

ЧИСЛО РУССКИЙ

Here are a couple of number puzzles in **Russian**.
Use them as content-related brain breaks or as a reward.

I started off using these with my college students. Later, I found that my middle school and high school students enjoyed them too. These are helpful because numbers are often not used enough for students to retain them. We want students to be able to use numbers fluently so we add numbers to every lesson. Using numbers in brain teasers like these gets students to repeat the numbers in their heads as they think about the answer, which is good training and makes them fluent.

The purpose of these puzzles is to:

- Have fun
- Reinforce the numbers
- Give students a brain break
- Use a different part of the brain for a while
- Stay in the target language, even during brain breaks
- Stay content-related, even during brain breaks
- Encourage students to think divergently
- Give everyone a chance, not just the academic super stars
- Set up some friendly competition
- Get students to give themselves repetitions in their own heads.
 - The teacher does not have to supply all of the repetitions to get students to acquire.
 - Students can be put in situations like this and trained to give themselves repetitions.

These puzzles are appropriate for all levels because numbers are abstract and students tend to forget them if we do not purposefully use numbers often.

What makes puzzles like this fun is that all students have a chance of figuring out the answer—not just the academic superstars. Students that think differently will often come up with the answer.

For both of these puzzles students will need to know these numbers in **Russian**:

1	2	3	4	5	6	7	8	9	10
один, два, три, четыре, пять, шесть, семь, восемь, девять, десять,									
11	12	13	14	15					
одиннадцать, двенадцать, тринадцать, четырнадцать, пятнадцать									

1	2	3	4	5	6	7	8	9	10
<i>odin, dva, tri, chetyre, pyat', shest' sem', vosem', devyat', desyat',</i>									
11	12	13	14	15					
<i>odinnadtsat', dvenadtsat', trinadtsat', chetyrnadtsat', pyatnadtsat'</i>									



Головоломка №1

Каков особый порядок этих чисел?

Write the numbers one at a time in columns. Do not write out all of the numbers right away. Let the students figure it out.

2 1 6 8 4 ← *It would be very difficult to figure out the pattern at this point*

Labels for each column using letters can make identification and discussion easier as you add numbers and students begin to guess.

A	Б	В	Г	Д	Е	Ё	Ж
2	1	6	8	4	12	11	14
3	5		9		13		
	7		10		15		
	0						

If they need more help,

1) Ask them what class this is. Ask them if it is math class. Ask if it is English class.

2) If they need more help, begin to write out the numbers as you point at each number and ask.

3) If they still haven't figured it out, add numbers above the letters—these will correspond to the solution to the puzzle—the number of letters in Russian in each word.

<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>10</i>	<i>11</i>	<i>13</i>
A	Б	В	Г	Д	Е	Ё	Ж
2	1	6	8	4	12	11	14
3	5		9		13		
	7		10		15		
	0						

<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>10</i>	<i>11</i>	<i>13</i>
A	Б	В	Г	Д	Е	Ё	Ж
два	один	шесть	восемь	четыре	двенадцать	одиннадцать	четырнадцать
три	пять		девять		тринадцать		
	семь		десять		пятнадцать		
	ноль						



Bryce Hedstrom

Головоломка №2

Каков особый порядок этих чисел?

(Алфавитный порядок)

ноль, один, два, три, четыре, пять, шесть, семь, восемь, девять, десять, одиннадцать, двенадцать, тринадцать, четырнадцать, пятнадцать

8
2
12
9
10
0
1
11
15
5
7
3
13
4
14
6

Write the numerals slowly and one at a time. Let students figure them out. When a few students think they know, do not let them blurt out the formula. Let them shine by telling you what the next number will be, one number at a time and one student at a time.

Do not give too much help too soon. If they need help, ask what the numbers are, one at a time. And then write out the word in Russian. But don't help too much. Don't give away the answer too quickly. Let them figure it out.

8	восемь
2	два
12	двенадцать
9	девять
10	десять
0	ноль
1	один
11	одиннадцать
15	пятнадцать
5	пять
7	семь
3	три
13	тринадцать
4	четыре
14	четырнадцать
6	шесть

(в алфавитном порядке на русском языке)



Bryce Hedstrom

Die Zahlen 0-15

Zahlenrätsel

Deutsch

Here are a couple of number puzzles in German, translated by [Eric Richards](#).

For both of these puzzles students will need to know these numbers in **German**:

null, eins, zwei, drei, vier, fünf, sechs, sieben, acht, neun, zehn, elf, zwölf, dreizehn, vierzehn, fünfzehn

Rätsel #1

Was ist die besondere Reihenfolge dieser Zahlen?

If students need help:

1) Ask what class this is. Ask them if it is math class. Ask if it is English class.

Welche Klasse ist das? Ist es Matheklasse? Ist es Englischklasse? Was lernen wir?

2) If they need more help, ask the Latin word for the numbers one at a time.

3) If they still haven't figured it out, write out the word for the numbers as you ask. Let the students produce the words for the numbers, not you.

4) If they still haven't figured it out, add numbers above the letters—these will correspond to the solution to the puzzle—the **number of letters in German in each word**.

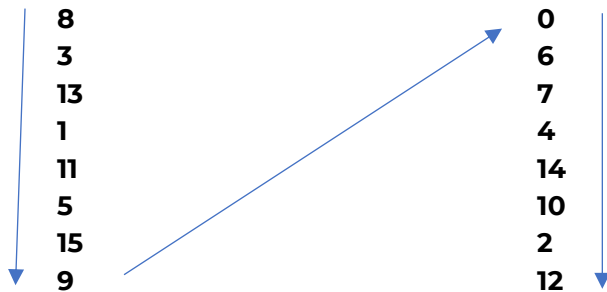
3	4	5	6	8
A	B	C	D	E
11	5	12	7	13
	2			15
	3			14
	0			
	4			
	1			
	10			
	8			
	9			
	6			

(You could also do an "odd" and "even" column for 4-letter number words, as many of these numbers are 4 - letter number words.)

3	4 - even	4 - odd	5	6	8
A	B	C	D	E	F
11	2	3	12	7	13
	10	1			15
	4	9			14
	8	5			
	6				
	(0)				

Rätsel #2

Was ist die besondere Reihenfolge dieser Zahlen?



This puzzle will go more quickly than the first because students will have the idea that it is a language-based puzzle for a language class, rather than a mathematics puzzle.

Write the numerals slowly and one at a time. Let students figure them out, but when a few students think they know, do not let them blurt out the formula. Let them shine by telling you what the next number will be, one number at a time and one student at a time.

Do not give too much help too soon. If they need help, ask what the numbers are, one at a time. And then write out the word in German. But don't help too much. Don't give away the answer too quickly. Let them figure it out...

8 - acht
3 - drei
13 - dreizehn
1 - eins
11 - elf
5 - fünf
15 - fünfzehn
9 - neun
0 - null
6 - sechs
7 - sieben
4 - vier
14 - vierzehn
10 - zehn
2 - zwei
12 - zwölf

(alphabetische Reihenfolge auf Deutsch)