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## Level 6

**Written zero 500 years older than scientists thought**

**17th September, 2017**

<http://www.breakingnewsenglish.com/1709/170917-zero.html>

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**Please try Levels 4 and 5 (they are easier).**

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# THE ARTICLE

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

Scientists from Oxford University in England have discovered that the written use of the zero is 500 years older than previously thought. The scientists used carbon dating to trace the symbol's origins to a famous ancient Indian scroll called the Bakhshali Manuscript. Scientists found the scroll dates back to the third century, which makes it the oldest script using the symbol. Before the carbon dating of the scroll, scientists believed the manuscript was created in the eighth century. It was found in the village of Bakhshali in 1881. The zero symbol that we use today evolved from a round dot frequently used in India. This symbol can be seen several times on the manuscript.

Marcus Du Santoy, a mathematics professor at Oxford University, explained the significance of the zero in our lives. He told Britain's 'Guardian' newspaper that: "Today, we take it for granted that the concept of zero is used across the globe and is a key building block of the digital world. But the creation of zero as a number in its own right, which evolved from the placeholder dot symbol found in the Bakhshali manuscript, was one of the greatest breakthroughs in the history of mathematics." Zero has many names in English, including nought, nil (in football) and love (in tennis). It is often said as "oh" in the context of telephone numbers. Informal or slang terms for zero include nowt, nada, zilch and zip.

Sources: <http://metro.co.uk/2017/09/15/earliest-use-of-zero-ever-discovered-on-ancient-manuscript-6929859/>  
<https://phys.org/news/2017-09-video-earliest-centuries-older-thought.html>  
<https://www.theguardian.com/science/2017/sep/14/much-ado-about-nothing-ancient-indian-text-contains-earliest-zero-symbol>

# WARM-UPS

**1. THE NUMBER ZERO:** Students walk around the class and talk to other students about the number zero. Change partners often and share your findings.

**2. CHAT:** In pairs / groups, talk about these topics or words from the article. What will the article say about them? What can you say about these words and your life?

Oxford University / zero / 500 years / ancient / century / manuscript / village / symbol mathematics / professor / significance / concept / breakthroughs / football / zip

Have a chat about the topics you liked. Change topics and partners frequently.

**3. SYMBOL:** Students A **strongly** believe the zero is the most important symbol in the world; Students B **strongly** believe another symbol is the most important. Change partners again and talk about your conversations.

**4. NUMBERS:** How important are these numbers and why? Complete this table with your partner(s). Change partners often and share what you wrote.

	How important?	Why?
0		
1		
9		
10		
100		
1,000,000		

**5. INDIA:** Spend one minute writing down all of the different words you associate with the word "India". Share your words with your partner(s) and talk about them. Together, put the words into different categories.

**6. SYMBOLS:** Rank these with your partner. Put the most important symbols at the top. Change partners often and share your rankings.

- 0
- \$
- %
- @
- x
- #
- ☺
- ☹

# BEFORE READING / LISTENING

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

**1. TRUE / FALSE:** Read the headline. Guess if a-h below are true (T) or false (F).

- a. Scientists from Cambridge University made a discovery. **T / F**
- b. Scientists used carbon dating to find out how old a manuscript was. **T / F**
- c. Scientists originally thought a manuscript was from the eighth century. **T / F**
- d. The manuscript was found in the 19th century. **T / F**
- e. A physics professor explained the significance of the zero. **T / F**
- f. A professor said the zero is the greatest breakthrough in mathematics. **T / F**
- g. In football, zero is also known as 'nil'. **T / F**
- h. When we read out telephone numbers, we pronounce zero as 'oh'. **T / F**

## 2. SYNONYM MATCH:

Match the following synonyms. The words in **bold** are from the news article.

- |                         |                  |
|-------------------------|------------------|
| 1. <b>discovered</b>    | a. developed     |
| 2. <b>origins</b>       | b. importance    |
| 3. <b>ancient</b>       | c. expressions   |
| 4. <b>evolved</b>       | d. found         |
| 5. <b>several</b>       | e. advances      |
| 6. <b>significance</b>  | f. beginnings    |
| 7. <b>key</b>           | g. circumstances |
| 8. <b>breakthroughs</b> | h. a number of   |
| 9. <b>context</b>       | i. crucial       |
| 10. <b>terms</b>        | j. very old      |

**3. PHRASE MATCH:** (Sometimes more than one choice is possible.)

- |   |                              |
|---|------------------------------|
| 1. The scientists used carbon                 | a. block                     |
| 2. dates                                      | b. dot                       |
| 3. the manuscript was created                 | c. of the zero in our lives  |
| 4. evolved from a round                       | d. telephone numbers         |
| 5. This symbol can be seen several            | e. in the eighth century     |
| 6. explained the significance                 | f. dating                    |
| 7. a key building                             | g. breakthroughs             |
| 8. one of the greatest                        | h. times on the manuscript   |
| 9. It is often said as "oh" in the context of | i. terms for zero            |
| 10. Informal or slang                         | j. back to the third century |

# GAP FILL

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

Scientists from Oxford University in England have (1) \_\_\_\_\_ that the written use of the zero is 500 years older than previously thought. The scientists used carbon (2) \_\_\_\_\_ to trace the symbol's origins to a famous (3) \_\_\_\_\_ Indian scroll called the Bakhshali Manuscript. Scientists found the scroll (4) \_\_\_\_\_ back to the third century, which makes it the oldest script using the (5) \_\_\_\_\_. Before the carbon dating of the scroll, scientists believed the manuscript was created in the eighth (6) \_\_\_\_\_. It was found in the village of Bakhshali in 1881. The zero symbol that we use today (7) \_\_\_\_\_ from a round dot frequently used in India. This symbol can be seen (8) \_\_\_\_\_ times on the manuscript.

*dating*  
*century*  
*dates*  
*several*  
*discovered*  
*evolved*  
*ancient*  
*symbol*

Marcus Du Santoy, a mathematics professor at Oxford University, explained the (9) \_\_\_\_\_ of the zero in our lives. He told Britain's 'Guardian' newspaper that: "Today, we take it for granted that the (10) \_\_\_\_\_ of zero is used across the globe and is a key building (11) \_\_\_\_\_ of the digital world. But the creation of zero as a number in its own right, which (12) \_\_\_\_\_ from the placeholder dot symbol found in the Bakhshali manuscript, was one of the greatest (13) \_\_\_\_\_ in the history of mathematics." Zero has many names in English, (14) \_\_\_\_\_ nought, nil (in football) and love (in tennis). It is often said as "oh" in the (15) \_\_\_\_\_ of telephone numbers. Informal or (16) \_\_\_\_\_ terms for zero include nowt, nada, zilch and zip.

*block*  
*including*  
*slang*  
*concept*  
*evolved*  
*context*  
*significance*  
*breakthroughs*

# LISTENING – Guess the answers. Listen to check.

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

- 1) the written use of the zero is 500 years older than \_\_\_\_\_
  - a. previous thought
  - b. imperviously thought
  - c. imperiously thought
  - d. previously thought
- 2) the scroll dates back to the third century, which makes it the oldest script \_\_\_\_\_
  - a. used in the symbol
  - b. using a symbol
  - c. using the symbol
  - d. using the symbols
- 3) scientists believed the manuscript was created in \_\_\_\_\_
  - a. the eightieth century
  - b. the eighth century
  - c. the eighth centuries
  - d. the eighth centurion
- 4) The zero symbol that we use today evolved from a round dot \_\_\_\_\_
  - a. frequency used
  - b. frequencies used
  - c. infrequently used
  - d. frequently used
- 5) This symbol can be seen several times \_\_\_\_\_
  - a. on the manuscript
  - b. in the manuscript
  - c. at the manuscript
  - d. of the manuscript
- 6) a mathematics professor at Oxford University, explained the \_\_\_\_\_ zero
  - a. significant of the
  - b. significantly of the
  - c. significance of the
  - d. signify ants of the
- 7) Today, we take it for granted that the concept of zero is used \_\_\_\_\_
  - a. a cross the globe
  - b. and cross the globe
  - c. all cross the globe
  - d. across the globe
- 8) But the creation of zero as a number \_\_\_\_\_
  - a. in its own right
  - b. in its owns right
  - c. in its own rights
  - d. in it is own right
- 9) Zero has many names in English, \_\_\_\_\_
  - a. include in nougat
  - b. including ought
  - c. including nought
  - d. include in out
- 10) It is often said as "oh" in the context of \_\_\_\_\_
  - a. telephone numerals
  - b. telephone number
  - c. telephone numbers
  - d. telephone numberings

# LISTENING – Listen and fill in the gaps

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

Scientists from Oxford University in England (1) \_\_\_\_\_ the written use of the zero is 500 years (2) \_\_\_\_\_ thought. The scientists used carbon (3) \_\_\_\_\_ the symbol's origins to a famous ancient Indian scroll called the Bakhshali Manuscript. Scientists found the scroll dates back to the third century, which makes it the oldest (4) \_\_\_\_\_ symbol. Before the carbon dating of the scroll, scientists believed the manuscript was created in (5) \_\_\_\_\_. It was found in the village of Bakhshali in 1881. The zero symbol that we use today evolved from a round dot frequently used in India. This symbol can be seen (6) \_\_\_\_\_ the manuscript.

Marcus Du Santoy, a (7) \_\_\_\_\_ at Oxford University, explained the significance of the zero in our lives. He told Britain's 'Guardian' newspaper that: "Today, we (8) \_\_\_\_\_ that the concept of zero is used across the globe and is a key building block of the digital world. But the creation of zero (9) \_\_\_\_\_ its own right, which evolved from the placeholder dot symbol found in the Bakhshali manuscript, was one of the (10) \_\_\_\_\_ in the history of mathematics." Zero has many names in English, including nought, nil (in football) and love (in tennis). (11) \_\_\_\_\_ "oh" in the context of telephone numbers. Informal or slang terms for zero include nowt, (12) \_\_\_\_\_.

# COMPREHENSION QUESTIONS

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

1. Which university are the scientists from?
2. What method did scientists use to find out the age of the manuscript?
3. What century does the manuscript date back to?
4. In what year was the manuscript found?
5. How many times can the zero symbol be seen on the manuscript?
6. What does professor Marcus Du Santoy teach?
7. In what world is the zero a key building block?
8. What was the zero one of the greatest ever breakthroughs in?
9. What term is used for zero in tennis?
10. In what context is zero pronounced "oh"?



# MULTIPLE CHOICE - QUIZ

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

- 1) Which university are the scientists from?
  - a) Cambridge
  - b) Oxford
  - c) Stanford
  - d) Yale
- 2) What method did scientists use to find out the age of the manuscript?
  - a) the age method
  - b) the Heimlich technique
  - c) the natural method
  - d) carbon dating
- 3) What century does the manuscript date back to?
  - a) third
  - b) fourth
  - c) fifth
  - d) sixth
- 4) In what year was the manuscript found?
  - a) 1818
  - b) 1698
  - c) 1881
  - d) 1188
- 5) How many times can the zero symbol be seen on the manuscript?
  - a) many
  - b) several
  - c) dozens
  - d) hundreds
- 6) What does professor Marcus Du Santoy teach?
  - a) archaeology
  - b) physics
  - c) mathematics
  - d) Sanskrit
- 7) In what world is the zero a key building block?
  - a) the dark ages
  - b) the human world
  - c) the modern world
  - d) the digital world
- 8) What was the zero one of the greatest ever breakthroughs in?
  - a) mathematics
  - b) history
  - c) computing
  - d) archaeology
- 9) What term is used for zero in tennis?
  - a) love
  - b) hate
  - c) like
  - d) so-so
- 10) In what context is zero pronounced "oh"?
  - a) football
  - b) telephone numbers
  - c) informal contexts
  - d) zips

# ROLE PLAY

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

## Role A – 0

You think **0** is the most important symbol in the world. Tell the others three reasons why. Tell them what is wrong with their symbols. Also, tell the others which is the least important of these (and why): **\$**, **#** or ☺.

## Role B – \$

You think **\$** is the most important symbol in the world. Tell the others three reasons why. Tell them what is wrong with their symbols. Also, tell the others which is the least important of these (and why): **0**, **#** or ☺.

## Role C – #

You think **#** is the most important symbol in the world. Tell the others three reasons why. Tell them what is wrong with their symbols. Also, tell the others which is the least important of these (and why): **\$**, **0** or ☺.

## Role D – ☺

You think ☺ is the most important symbol in the world. Tell the others three reasons why. Tell them what is wrong with their symbols. Also, tell the others which is the least important of these (and why): **\$**, **#** or **0**.

# AFTER READING / LISTENING

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

**1. WORD SEARCH:** Look in your dictionary / computer to find collocates, other meanings, information, synonyms ... for the words 'zero' and 'nil'.

<b>zero</b>	<b>nil</b>
-------------	------------

- Share your findings with your partners.
- Make questions using the words you found.
- Ask your partner / group your questions.

**2. ARTICLE QUESTIONS:** Look back at the article and write down some questions you would like to ask the class about the text.

- Share your questions with other classmates / groups.
- Ask your partner / group your questions.

**3. GAP FILL:** In pairs / groups, compare your answers to this exercise. Check your answers. Talk about the words from the activity. Were they new, interesting, worth learning...?

**4. VOCABULARY:** Circle any words you do not understand. In groups, pool unknown words and use dictionaries to find their meanings.

**5. TEST EACH OTHER:** Look at the words below. With your partner, try to recall how they were used in the text:

<ul style="list-style-type: none"><li>• 500</li><li>• trace</li><li>• dates</li><li>• third</li><li>• 1881</li><li>• several</li></ul>	<ul style="list-style-type: none"><li>• professor</li><li>• concept</li><li>• own</li><li>• history</li><li>• love</li><li>• slang</li></ul>
--	--

# THE NUMBER ZERO SURVEY

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

Write five GOOD questions about the number zero in the table. Do this in pairs. Each student must write the questions on his / her own paper. When you have finished, interview other students. Write down their answers.

	STUDENT 1 _____	STUDENT 2 _____	STUDENT 3 _____
Q.1.			
Q.2.			
Q.3.			
Q.4.			
Q.5.			

- Now return to your original partner and share and talk about what you found out. Change partners often.
- Make mini-presentations to other groups on your findings.

# THE NUMBER ZERO DISCUSSION

STUDENT A's QUESTIONS (Do not show these to student B)

1. What did you think when you read the headline?
2. What images are in your mind when you hear the word 'zero'?
3. What do you know about the history of the zero?
4. How important is the zero?
5. Does the zero have a good design?
6. Who do you think first used a zero?
7. What do you think of the word 'zero'?
8. In what contexts are zeroes important?
9. What symbol could we use instead of a zero?
10. What does the phrase, 'from hero to zero' mean?

*Written zero 500 years older than scientists thought – 17th September, 2017*  
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# THE NUMBER ZERO DISCUSSION

STUDENT B's QUESTIONS (Do not show these to student A)

11. Did you like reading this article? Why/not?
12. What do you think of when you hear the word 'symbol'?
13. What do you think about what you read?
14. How good are you at maths?
15. Why are zeroes so important in the digital world?
16. Why was the zero such a historical breakthrough?
17. Why does English use 'love' to mean zero in tennis?
18. Who invented numbers?
19. What different names are there for zero in your country?
20. What questions would you like to ask the scientists?

## **DISCUSSION (Write your own questions)**

STUDENT A's QUESTIONS (Do not show these to student B)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

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## **DISCUSSION (Write your own questions)**

STUDENT B's QUESTIONS (Do not show these to student A)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

# LANGUAGE - CLOZE

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

Scientists from Oxford University in England have discovered that the (1) \_\_\_\_\_ use of the zero is 500 years older than (2) \_\_\_\_\_ thought. The scientists used carbon dating to (3) \_\_\_\_\_ the symbol's origins to a famous ancient Indian scroll called the Bakhshali Manuscript. Scientists found the scroll (4) \_\_\_\_\_ back to the third century, which makes it the oldest script using the symbol. Before the carbon dating of the scroll, scientists believed the manuscript was created in the eighth century. It was found in the village of Bakhshali in 1881. The zero symbol that we use today evolved from a round (5) \_\_\_\_\_ frequently used in India. This symbol can be seen (6) \_\_\_\_\_ times on the manuscript.

Marcus Du Santoy, a mathematics professor at Oxford University, explained the (7) \_\_\_\_\_ of the zero in our lives. He told Britain's 'Guardian' newspaper that: "Today, we (8) \_\_\_\_\_ it for granted that the concept of zero is used across the globe and is a (9) \_\_\_\_\_ building block of the digital world. But the creation of zero as a number in its own right, which (10) \_\_\_\_\_ from the placeholder dot symbol found in the Bakhshali manuscript, was one of the greatest breakthroughs in the history of mathematics." Zero has many names in English, (11) \_\_\_\_\_ nought, nil (in football) and love (in tennis). It is often said as "oh" in the context of telephone numbers. Informal or (12) \_\_\_\_\_ terms for zero include nowt, nada, zilch and zip.

## Put the correct words from the table below in the above article.

- |     |               |                  |                   |                 |
|-----|---------------|------------------|-------------------|-----------------|
| 1.  | (a) writing   | (b) writes       | (c) write         | (d) written     |
| 2.  | (a) previous  | (b) provisions   | (c) previews      | (d) previously  |
| 3.  | (a) race      | (b) trace        | (c) grace         | (d) brace       |
| 4.  | (a) rates     | (b) data         | (c) dates         | (d) years       |
| 5.  | (a) dotty     | (b) doting       | (c) dot           | (d) dote        |
| 6.  | (a) several   | (b) severe       | (c) serene        | (d) server      |
| 7.  | (a) signifies | (b) significance | (c) significantly | (d) significant |
| 8.  | (a) take      | (b) make         | (c) fake          | (d) sake        |
| 9.  | (a) answer    | (b) key          | (c) chain         | (d) lock        |
| 10. | (a) involved  | (b) revolved     | (c) evolved       | (d) absolved    |
| 11. | (a) includes  | (b) inclusive    | (c) including     | (d) inclusion   |
| 12. | (a) sling     | (b) slug         | (c) slink         | (d) slang       |

# SPELLING

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

## Paragraph 1

1. use of the zero is 500 years older than roipveuyls thought
2. a famous canetni Indian scroll
3. created in the eighth cyurnte
4. The zero oblmsy that we use today evolved
5. a round dot qternlyeuf used in India
6. This lyomsb can be seen several times

## Paragraph 2

7. a mathematics reofrsop at Oxford University
8. explained the iicafngscein of the zero
9. the necotpc of zero
10. one of the reegstat breakthroughs
11. in the eoxtcnt of telephone numbers
12. Informal or sgnal terms



# PUT THE TEXT BACK TOGETHER

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

**Number these lines in the correct order.**

- ( ) is often said as "oh" in the context of telephone numbers. Informal or slang terms for zero include nowt, nada, zilch and zip.
- ( ) dating of the scroll, scientists believed the manuscript was created in the eighth century. It was found in
- ( ) older than previously thought. The scientists used carbon dating to trace the symbol's origins to a famous ancient
- ( **1** ) Scientists from Oxford University in England have discovered that the written use of the zero is 500 years
- ( ) dot frequently used in India. This symbol can be seen several times on the manuscript.
- ( ) world. But the creation of zero as a number in its own right, which evolved
- ( ) century, which makes it the oldest script using the symbol. Before the carbon
- ( ) Indian scroll called the Bakhshali Manuscript. Scientists found the scroll dates back to the third
- ( ) granted that the concept of zero is used across the globe and is a key building block of the digital
- ( ) Marcus Du Santoy, a mathematics professor at Oxford University, explained the significance
- ( ) the village of Bakhshali in 1881. The zero symbol that we use today evolved from a round
- ( ) from the placeholder dot symbol found in the Bakhshali manuscript, was one of the greatest breakthroughs
- ( ) in the history of mathematics." Zero has many names in English, including nought, nil (in football) and love (in tennis). It
- ( ) of the zero in our lives. He told Britain's 'Guardian' newspaper that: "Today, we take it for

# PUT THE WORDS IN THE RIGHT ORDER

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

1. years is Use older of than the previously zero thought 500 .
2. symbol's dating origins to Scientists trace used the carbon .
3. century the back third found dates the Scientists scroll to .
4. symbol The a today zero round evolved we dot from use that .
5. the symbol seen on This be times manuscript can several .
6. of concept the that granted for it take We used is zero .
7. number creation its of own zero right as The in a .
8. One greatest the mathematics the in of of breakthroughs history .
9. in said telephone often of "oh" is context It the as numbers .
10. or Informal nowt include zero for terms slang .

# CIRCLE THE CORRECT WORD (20 PAIRS)

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

Scientists from Oxford University in England have *recovered* / *discovered* that the written use of *the* / *a* zero is 500 years older than *previous* / *previously* thought. The scientists used carbon dating to *trace* / *brace* the symbol's origins to a famous ancient Indian scroll called the Bakhshali Manuscript. Scientists found the scroll *dates* / *dating* back to the third century, which *makes* / *has* it the oldest script using the symbol. Before the carbon dating of the scroll, scientists *belief* / *believed* the manuscript was created in the eighth *century* / *centuries*. It was found in the village of Bakhshali in 1881. The zero symbol that we use today *evolved* / *revolved* from a round dot frequently used in India. This symbol can be seen *severe* / *several* times on the manuscript.

Marcus Du Santoy, a mathematics professor at Oxford University, explained the *significance* / *significant* of the zero in our *livelihoods* / *lives*. He told Britain's 'Guardian' newspaper that: "Today, we take it *for* / *from* granted that the concept of zero is used *crossed* / *across* the globe and is a key building block of the digital *earth* / *world*. But the creation of zero as a number in its own *rightly* / *right*, which evolved from the placeholder dot *symbol* / *symbolic* found in the Bakhshali manuscript, was one of the greatest *breakouts* / *breakthroughs* in the history of mathematics." Zero has many names in English, including nought, nil (in football) and love (in tennis). It is often said as "oh" in the *context* / *contract* of telephone numbers. Informal or slang *trims* / *terms* for zero include nowt, nada, zilch and zip.

**Talk about the connection between each pair of words in italics, and why the correct word is correct.**

# INSERT THE VOWELS (a, e, i, o, u)

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

Sc\_\_nt\_sts fr\_m \_xf\_rd \_n\_v\_rs\_ty \_n \_ngl\_nd h\_v\_  
d\_sc\_v\_r\_d th\_t th\_ wr\_tt\_n \_s\_ \_f th\_ z\_r\_ \_s 500  
y\_\_rs \_ld\_r th\_n pr\_v\_\_\_sly th\_\_ght. Th\_ sc\_\_nt\_sts  
\_s\_d c\_rb\_n d\_t\_ng t\_ tr\_c\_ th\_ symb\_l's \_r\_g\_ns t\_ \_  
f\_m\_\_s \_nc\_\_nt \_nd\_\_n scr\_ll c\_ll\_d th\_ B\_khsh\_l\_  
M\_n\_scr\_pt. Sc\_\_nt\_sts f\_\_nd th\_ scr\_ll d\_t\_s b\_ck t\_  
th\_ th\_rd c\_nt\_ry, wh\_ch m\_k\_s \_t th\_ \_ld\_st scr\_pt  
\_s\_ng th\_ symb\_l. B\_f\_r\_ th\_ c\_rb\_n d\_t\_ng \_f th\_  
scr\_ll, sc\_\_nt\_sts b\_l\_v\_d th\_ m\_n\_scr\_pt w\_s  
cr\_\_t\_d \_n th\_ \_\_ghth c\_nt\_ry. \_t w\_s f\_\_nd \_n th\_  
v\_ll\_g\_ \_f B\_khsh\_l\_ \_n 1881. Th\_ z\_r\_ symb\_l th\_t w\_  
\_s\_ t\_d\_y \_v\_lv\_d fr\_m \_r\_\_nd d\_t fr\_q\_\_ntly \_s\_d \_n  
\_nd\_\_\_. Th\_s symb\_l c\_n b\_ s\_\_n s\_v\_r\_l t\_m\_s \_n th\_  
m\_n\_scr\_pt.

M\_rc\_s D\_ S\_nt\_y, \_ m\_th\_m\_t\_cs pr\_f\_ss\_r \_t \_xf\_rd  
\_n\_v\_rs\_ty, \_xpl\_\_n\_d th\_ s\_gn\_f\_c\_nc\_ \_f th\_ z\_r\_  
\_n \_\_r\_l\_v\_s. H\_t\_ld Br\_t\_\_n's 'G\_\_rd\_\_n' n\_wsp\_p\_r  
th\_t: "T\_d\_y, w\_ t\_k\_ \_t fr\_gr\_nt\_d th\_t th\_ c\_nc\_pt  
\_f z\_r\_ \_s \_s\_d \_cr\_ss th\_ gl\_b\_ \_nd \_s \_k\_y  
b\_\_ld\_ng bl\_ck \_f th\_ d\_g\_t\_l w\_rld. B\_t th\_ cr\_\_t\_\_n  
\_f z\_r\_ \_s \_n mb\_r \_n ts \_wn\_r\_ght, wh\_ch \_v\_lv\_d  
fr\_m th\_ pl\_c\_h\_ld\_r d\_t symb\_l f\_\_nd \_n th\_  
B\_khsh\_l\_ m\_n\_scr\_pt, w\_s \_n\_ \_f th\_ gr\_\_t\_st  
br\_\_kthr\_ghs \_n th\_ h\_st\_ry \_f m\_th\_m\_t\_cs." Z\_r\_  
h\_s m\_ny n\_m\_s \_n \_ngl\_sh, \_ncl\_d\_ng n\_\_ght, n\_l (\_n  
f\_\_tb\_ll) \_nd l\_v\_ (\_n t\_nn\_s). \_t \_s \_ft\_n s\_\_d \_s  
"\_h" \_n th\_ c\_nt\_xt \_f t\_l\_ph\_n\_n\_mb\_rs. \_nf\_rm\_l\_r  
sl\_ng t\_rms f\_r z\_r\_ \_ncl\_d\_ n\_wt, n\_d\_, z\_lch \_nd  
z\_p.

# PUNCTUATE THE TEXT AND ADD CAPITALS

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

scientists from oxford university in england have discovered that the written use of the zero is 500 years older than previously thought the scientists used carbon dating to trace the symbol's origins to a famous ancient indian scroll called the bakhshali manuscript scientists found the scroll dates back to the third century which makes it the oldest script using the symbol before the carbon dating of the scroll scientists believed the manuscript was created in the eighth century it was found in the village of bakhshali in 1881 the zero symbol that we use today evolved from a round dot frequently used in india this symbol can be seen several times on the manuscript

marcus du santoy a mathematics professor at oxford university explained the significance of the zero in our lives he told britain's 'guardian' newspaper that "today we take it for granted that the concept of zero is used across the globe and is a key building block of the digital world but the creation of zero as a number in its own right which evolved from the placeholder dot symbol found in the bakhshali manuscript was one of the greatest breakthroughs in the history of mathematics" zero has many names in english including nought nil (in football) and love (in tennis) it is often said as "oh" in the context of telephone numbers informal or slang terms for zero include nowt nada zilch and zip

# PUT A SLASH ( / ) WHERE THE SPACES ARE

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

Scientists from Oxford University in England have discovered that the written use of the zero is 500 years older than previously thought. The scientists used carbon dating to trace the symbol's origin to a famous ancient Indian scroll called the Bakhshali Manuscript. Scientists found the scroll dates back to the third century, which makes it the oldest script using the symbol. Before the carbon dating of the scroll, scientists believed the manuscript was created in the eighth century. It was found in the village of Bakhshali in 1881. The zero symbol that we use today evolved from a round dot frequently used in India. This symbol can be seen several times on the manuscript. Marcus Du Santoy, a mathematics professor at Oxford University, explained the significance of the zero in our lives. He told Britain's 'Guardian' newspaper that: "Today, we take it for granted that the concept of zero is used across the globe and is a key building block of the digital world. But the creation of zero as a number in its own right, which evolved from the placeholder dot symbol found in the Bakhshali manuscript, was one of the greatest breakthroughs in the history of mathematics." Zero has many names in English, including nought, nil (in football) and love (in tennis). It is often said as "oh" in the context of telephone numbers. In formal or slang terms for zero include nowt, nada, zilch and zip.



# ACADEMIC WRITING

From <http://www.BreakingNewsEnglish.com/1709/170917-zero.html>

Zero is the most important number. Discuss.

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# HOMework

**1. VOCABULARY EXTENSION:** Choose several of the words from the text. Use a dictionary or Google's search field (or another search engine) to build up more associations / collocations of each word.

**2. INTERNET:** Search the Internet and find out more about this news. Share what you discover with your partner(s) in the next lesson.

**3. THE NUMBER ZERO:** Make a poster about the number zero. Show your work to your classmates in the next lesson. Did you all have similar things?

**4. ZERO:** Write a magazine article about the number zero. Argue that it is the most important number. Include imaginary interviews with people who agree with this and with those who disagree with it.

Read what you wrote to your classmates in the next lesson. Write down any new words and expressions you hear from your partner(s).

**5. WHAT HAPPENED NEXT?** Write a newspaper article about the next stage in this news story. Read what you wrote to your classmates in the next lesson. Give each other feedback on your articles.

**6. LETTER:** Write a letter to an expert on the number zero. Ask him/her three questions about the number. Give him/her three of your opinions on the number zero. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.

# ANSWERS

## TRUE / FALSE (p.4)

a F    b T    c T    d T    e F    f F    g T    h T

## SYNONYM MATCH (p.4)

- |                  |                  |
|------------------|------------------|
| 1. discovered    | a. found         |
| 2. origins       | b. beginnings    |
| 3. ancient       | c. very old      |
| 4. evolved       | d. developed     |
| 5. several       | e. a number of   |
| 6. significance  | f. importance    |
| 7. key           | g. crucial       |
| 8. breakthroughs | h. advances      |
| 9. context       | i. circumstances |
| 10. terms        | j. expressions   |

## COMPREHENSION QUESTIONS (p.8)

1. Oxford
2. Carbon dating
3. The third century
4. 1881
5. Several times
6. Mathematics
7. The digital world
8. Mathematics
9. Love
10. Telephone numbers

## MULTIPLE CHOICE - QUIZ (p.9)

1. b    2. d    3. a    4. c    5. b    6. c    7. d    8. a    9. a    10. b

## ALL OTHER EXERCISES

Please check for yourself by looking at the Article on page 2.  
(It's good for your English ;-)