

Most likely number of contactable alien civilizations is 36

Level 1 • Pre-intermediate / Intermediate

1 Warmer

Test your general knowledge in this space quiz.

- How many planets are there in our solar system?
 - 7 (+ 8 dwarf planets)
 - 8 (+ 5 dwarf planets)
- A light year is ...
 - the distance that light travels in one year.
 - the distance from the Earth to the Sun.
- A light year is ...
 - nearly five billion kilometres.
 - nearly ten trillion kilometres.
- The distance from the Earth to our moon is ...
 - 40,384 km.
 - 384,400 km.
- Man first walked on the moon in ...
 - 1962.
 - 1969.

2 Key words

Match the key words with the definitions. Then find them in the article to read them in context. The paragraph numbers will help you.

research estimate civilization equation communicate calculation

- A _____ is a result you get by doing mathematics or using scientific methods. (para 1)
- A _____ is a society that has developed its own culture. (para 1)
- When you talk to someone, you _____ with them. (para 1)
- An _____ is an amount you decide is probably right using the information you have. (para 3)
- _____ is work done by scientists to find new facts and information. (para 3)
- An _____ is a calculation that must consider several factors. (para 4)

assumption likely tool reasonable form survive

- A _____ is something that helps you do a job or task. (para 5)
- An _____ is something that you think is true even though you do not know for sure. (para 6)
- When things _____, they start to develop or exist. (para 7)
- If something is _____, it is sensible and fair, and probably true. (para 8)
- If something is _____, it is probably going to happen or probably true. (para 10)
- If people _____, they continue to stay alive and exist. (para 11)

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Scientists say most likely number of contactable alien civilizations is 36

Nicola Davis

15 June, 2020

- 1 They may not be little green men. They may not arrive in a big space ship. But new calculations say that there could be more than 30 intelligent civilizations in our galaxy today that can communicate with others.
- 2 Scientists say their work tells us more about the possibility of life on other planets and also about our own future.
- 3 "I think it is extremely important and exciting. For the first time, we have an estimate for the number of intelligent civilizations that we could try to contact," said Christopher Conselice, a professor at the University of Nottingham and a co-author of the research.
- 4 In 1961, the astronomer Frank Drake developed the Drake equation. It lists seven factors we need to know to get an estimate for the number of intelligent civilizations in our galaxy.
- 5 Past estimates that used the Drake equation showed that there are between zero and a few billion civilizations. "The Drake equation is more like a tool for thinking about questions," said Conselice.
- 6 Conselice and colleagues have added new data and assumptions to the equation to get their new estimates.
- 7 "We made the assumption that intelligent life would form on other planets like it has on Earth," said Conselice.
- 8 The assumption is reasonable because everything from chemical reactions to star formation can happen if the conditions are right, he said. "If intelligent life forms in a scientific way, we would expect many civilizations within our galaxy," he said.
- 9 He said that he believes alien life could look similar to life on Earth. "We wouldn't be shocked when we saw them," he said.
- 10 On Earth, life formed between 4.5 billion and 5.5 billion years after star formation. Using this timescale as an assumption, there are likely to be between four and 211 intelligent civilizations in the Milky Way today. Thirty-six is the most likely number. But Conselice said the number could be higher.
- 11 But our civilization would need to survive at least another 6,120 years for two-way communication because the closest intelligent civilization is probably 17,000 light years from Earth, Conselice explained.

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3 Comprehension check

Are the statements true (T) or false (F) according to the article? Correct any that are false.

1. Scientists say that there are more than 30 planets where intelligent aliens might live.
2. They say that we will be able to speak to aliens 36 years from now.
3. They think that alien life forms will probably be little green men.
4. They made their calculations by adding new data to a 60-year-old equation.
5. They assume that, because there is life on Earth, there must be life on other planets that are similar to Earth.

4 Space vocabulary

Match the words in the left-hand column with the words in the right-hand column to make phrases from the text.

- | | |
|-----------------|--------------|
| 1. Milky | a. men |
| 2. space | b. Way |
| 3. little green | c. formation |
| 4. alien | d. year |
| 5. star | e. ship |
| 6. light | f. life |

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5 Word stress

a. Match these words from task 2 with their pronunciation patterns.

- | | |
|--------------------|----------|
| 1. calculation | a. oOo |
| 2. civilization | b. ooOo |
| 3. communicate | c. oOoo |
| 4. estimate (noun) | d. Oo |
| 5. equation | e. Ooo |
| 6. assumption | f. Oooo |
| 7. reasonable | g. oOo |
| 8. likely | h. oooOo |

b. Find six more words from the article that you would like to learn to say. Write them on the lines and draw their pronunciation patterns.

- _____
- _____
- _____
- _____
- _____
- _____

6 Writing and speaking

a. Complete the sentences so they are true for you.

- I think that there *is / isn't* intelligent life on other planets.
- I think that it *is / isn't* important to know for sure.
- I *would / wouldn't* like to talk to an alien.

b. What questions would you ask an alien?

c. Share your answers to tasks a and b with other students.