Can animals count reading passage

Can animals count?

1. According to psychologist Elizabeth Brannon, the capacity to discern between a large and a small number is the most fundamental numerical skill. If the ratio is large enough, humans can accomplish this with ease, but can other animals perform this task? In one experiment, Rhesus monkeys and college students inspected two sets of geometrical shapes that momentarily appeared on a computer monitor. They were required to determine which set had more items. Importantly, Brannon's team discovered that, like humans, monkeys make more mistakes when the numbers of objects in two sets are close together. The kids' performance ultimately resembles that of a monkey. She states it.

2. Both humans and monkeys are animals belonging to the primate family. However, they are not the only creatures whose numerical abilities depend on ratios. The same appears to be true for certain amphibians. The team of psychologist Claudia Uller enticed salamanders with two sets of fruit flies contained in transparent tubes. In a series of experiments, the researchers observed which tube the salamanders scurried towards, hypothesizing that if the salamanders had the ability to discern numbers, they would choose the tube with the greater number. The salamanders were able to distinguish between tubes carrying 8 and 16 flies but not between tubes containing 3, 4, 6, or 8 flies. For salamanders to be able to distinguish between two numbers, the larger one must be at least twice as large as the smaller one. However, they were able to distinguish between 2 and 3 flies equally as well as between 1 and 2 flies, indicating that they identify smaller numbers differently than bigger ones.

3. Researchers have found that mosquitofish instinctively form large shoals, lending further credence to this notion. While mosquitofish can discern the difference between a group of 3 shoal-mates and a group of 4, they showed no preference between groups of 4 and 5 when it came to the number of shoal-mates. It was discovered by the researchers that mosquitofish can distinguish between a maximum of 16 numbers, but only if the shoal-to-shoal ratio exceeds 2:1. In other words, fish, like salamanders, appear to have both the approximate and precise number systems present in more sophisticated creatures such as humans and other primates in infancy.

4.However, some critics argue that the animals may be relying on factors other than their number in order to complete the tasks. As Brannon points out, "any study that claims an animal is capable of representing a number should also be controlled for other factors." However, experiments on monkeys have shown that they are capable of performing mathematical feats without the need for additional cues. The mosquitofish studies were rerun, this time with different geometrical shapes in place of fish, in order to investigate this potential. Although each shape had a varied number of particles, the team arranged them in such a way that they had the same overall surface area and luminosity. The researchers conducted hundreds of experiments on 14 different species of fish and discovered that two out of three objects were continuously ignored by the fish. Mosquitofish are currently being tested to see if they can recognize three geometric shapes from four.

5. This skill may be found in even the most primitive of species. One chamber contained sugar water, which the bees preferred, while the other was bare. Jurgen Tautz dispatched a colony of bees down this hallway to see what would happen. Each compartment was labeled with a different number of geometric shapes—between 2 and 6—to test the bees' ability to count. The bees quickly mastered the art of identifying which chamber contained the number of shapes. As with salamanders and fish, the bees' mathematical prowess was limited; they could discern up to four forms, but not more than five or six.

6. Still, these investigations do not answer the question of whether animals are taught to count or if they are born with the ability. A mathematical mind would have an evolutionary advantage if this is the case. An experiment involving three- and four-day-old chicks has yielded evidence that this may be the case. Chicks, like mosquitofish, love to be in close proximity to as many of their siblings as possible, so they'll always travel toward a larger group of relatives. In the initial few days of their lives, chicks are surrounded by certain objects, and they develop a strong attachment to these objects. These objects were treated as though they were members of one's family by researchers. Each chick was placed in the middle of a platform and shown in two The researchers made groups of paper balls. Afterward, they concealed the two piles behind screens before revealing them to the chick and altering the quantities in each pile. To determine which side had the most "prothers," the chick was forced into rudimentary arithmetic. For reasons that aren't clear, these chicks flew to the larger group at a rate that was far above random. According to the researchers, they were merely performing some basic math.

7. Foraging for food would be much easier if an animal had the ability to learn these skills. Those animals in the search for food have to make regular decisions about which trees have the most fruit or which patches of flowers have the most nectar. Numeracy has a number of other advantages that may not be immediately apparent. Some convincing evidence suggests that female coots count the eggs they've already laid before making any decisions about whether or not to increase their clutch size. It's hard to say how old these abilities are with certainty. We can only begin to comprehend the fundamental circumstances of the evolution of numbers.

IELTS Reading Questions - Can Animals Count Reading Passage

Questions 1–7

Complete the table below.
For each answer, choose no more than three words from the passage.
Write your answers in the blank spaces next to 1–7 on your answer sheet.

Subjects	**Experiment**	**Results**

Rhesus monkeys and humans	I looked at two sets of geometrics on a computer screen.	The performance of the two groups is almost 1...
Chicks	chose between two sets of 2…… which are altered	Chicks can do calculations in order to choose a larger group.
coots	The behaviors of 3... birds were observed.	The bird seems to have the ability to count eggs.
salamanders	offered clear tubes containing different quantities of 4...	Salamanders distinguish between numbers over four if the bigger number is at least two times larger.
5.....	They show real shoals and later artificial ones of geometrical shapes; these are used to check the influence of a total of 6... and brightness.	All subjects know the difference between two and three and possibly three and four, but not between four and five.
bees	I had to learn where 7... was stored.	I could soon choose the correct place.

Questions 8–11

Do the following statements agree with the information given in the can animals count reading passage ? For the questions 8-11 on your answer sheet, write

True if the statement agrees with the information.
The statement is **false** if it contradicts the information.
Not Given If there is no information on this

8. Primates are better at identifying the larger of two numbers if one is much bigger than the other.
9. Jurgen Tautz trained the insects in his experiment to recognize the shapes of individual numbers.
10. The research involving young chicks took place over two separate days.
11. The experiment with chicks suggests that some numerical ability exists in newborn animals.

Question 12 and 13

Answer the following question:

Write **NO MORE THAN TWO WORDS** from the passage for each answer

12. Other than humans, which animal belongs to the primate family?
13. Who has given this statement “the capacity to discern between a large and a small number is the most fundamental numerical skill”?