

# CONFIDENTIAL

## EyeDetect Number Test



### Overview

Polygraph examiners often conduct pre-test demonstrations in an attempt to show participants that the polygraph instrument works. This is done to assist in reinforcing the test's validity, get the participant accustomed to the sensors, and to build trust in the process. These pre-test demonstrations are often called stimulation tests (STIM tests) or acquaintance tests.

In the typical polygraph stim test, the examiner asks the participant to write down a number on a piece of paper between 3 and 8. At that point, the examiner asks the participant to divulge the number. Then, the examiner conducts a polygraph test asking the participant which number was selected. The participant is instructed to deny choosing the number written down. In other words, the participant is directed to lie about choosing the number. This is done to invoke a physical reaction when lying about the number chosen.

During the polygraph test, the examiner attempts to demonstrate to the participant that there is a physiological change when lying about (denying) the number selected. The examiner shows the participant data from the polygraph instrument during the test to prove the participant reacted when asked about the number selected.

The examiner is considered successful if she/he can show the participant that there was a physical change when lying about the number selected.

### Number Test

Converus has created a similar test that is used as a demonstration of EyeDetect for customers and interested parties. This test is called the Number Test. Similar to the polygraph stim test, the participant is asked by the test administrator to choose a number between 2 and 9, write it down, conceal the number, and then take the EyeDetect test. The participant is also instructed to lie about the number chosen.

However, in the case of EyeDetect, the Number Test is conducted "blind." This means that the participant does not divulge the number chosen to the test administrator until after the test is completed and scored. Conducting a stim test this way is considered riskier because the test administrator reveals the number to the participant prior to learning which number the participant selected.

The EyeDetect Number Test has been conducted over a thousand times. The rate of accuracy is approximately 93%.

The Number Test takes approximately 8 minutes. It's a simple, quick way to show that EyeDetect really works, without incriminating anyone in a real lie detection test.

### Instructions

The number test is designed to show that it is possible to measure deception by observing subtle changes in the eyes, and those changes are involuntary and uncontrollable. Participants must fully cooperate while taking the test and follow the instructions.

The participant should remove any distractions from the testing area. The participant should use headphones

to listen to the test instructions and questions. The test should be taken in a quiet setting, free of distractions. The test should be administered by a trained test administrator.

The participant should choose a number between 2 and 9, write it down on paper, and put that paper in their pocket without disclosing the number to anyone. During the test, the participant must answer all questions truthfully, except when asked about the number chosen. When asked about the number chosen, the participant must lie and deny selecting that number. All questions are True/False.

The participant must listen to the entire question before answering because the questions are written in a variety of ways (active voice, passive voice and with negations). This is done to avoid habituation. The participant must read and think about each question before responding (true or false).

Under normal demonstration conditions, if the participant cooperates and responds accurately to the questions and if EyeDetect does not select the correct number, the participant will be given an economic incentive. If the participant does not cooperate, the system will detect it and will fail.

The following are examples of non-cooperative behavior:

- intentionally answering questions incorrectly (a high missed question percentage)
- answering at random
- not waiting until the entire phrase is read before answering
- intentionally not answering the questions on time
- squinting or blinking excessively

### How Does It Work?

The EyeDetect Number Test results are only based on measuring pupil dilation. Pupil dilation is one of the many eye behaviors monitored during a standard Test and it is very diagnostic. For the purposes of this test, pupil dilation is measured to show the diagnostic nature of that singular eye behavior.

### Questions

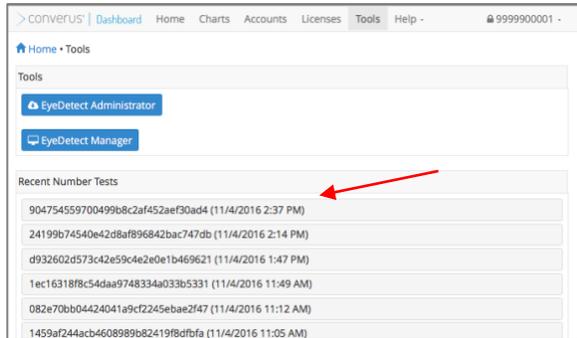
The participant is asked to read statements, which are written in a variety of ways. See the table below for examples. To ensure the participant understands the instructions, the test administrator should review these question types with the participant prior to the test.

Question Type	Expected Answer	
	True	False
The number that I chose was 1		x
I did not choose the number 2	x	
The number 3 was my choice		x
I chose 4 as my number		x
.....		
10 was not that number that I chose	x	

During the test, the test administrator should observe the participant to ensure they answer correctly. If there are excessive errors, the test administrator should stop the test, rehearse with the participant the true/false question format again, and re-start the test using the same number (which should remain concealed).

### To See Test Results

Go to: EyeDetect Dashboard > Tools  
Click on the link for the test (date/time are shown).



The top 3 deceptive numbers are listed.

Test Results	
Rank	Number(s)
1	6
2	9
3	7

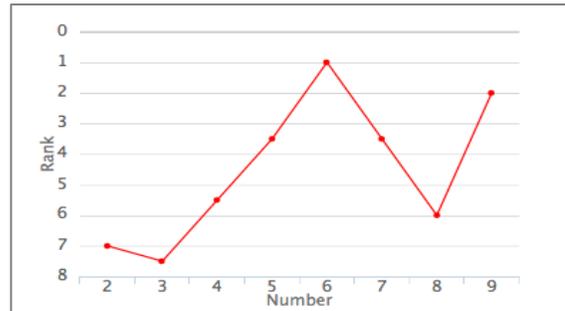
  

Examinee's Number
6

Record the participant's number in the box.



The graph shows the most deceptive numbers.



Accuracy of responses is shown. Too many incorrect answers will get a failed test for non-compliance. Pupil diameter is listed. Notice the slight difference in size between the top number and the second number.

Test Detail			
Number	Answered Incorrectly	Timed Out	Average Pupil Diameter
2	0%	0%	3.590164
3	0%	0%	3.608503
4	0%	0%	3.79541
5	0%	0%	3.585298
6	0%	0%	3.561374
7	0%	0%	3.552458
8	0%	0%	3.540525
9	0%	0%	3.565002

## Sample Script for Setting Up a Numbers Test

(I usually do something like this while getting the test set up.)

The number test is used to show how your eyes react when lying. Today, I am going to ask you to choose a number between 2 and 9. You will write down that number on a piece of paper and hide it from view. During the test, I want you to deny having written down that number. Essentially, you should lie about the number you wrote. On the other hand, you should tell the truth about all other numbers that you did not write down.

You will take a test that will ask you true or false questions about the number you chose. For example, if you chose the number 1, and the question states: "I chose the number 1 today," you would answer FALSE, because you should lie about choosing that number. If the question states, "I did not write down the number 1 today," you would answer TRUE, because you did write down the number 1 but you are supposed to lie about it.

You should when answering any questions about the number you chose. You should tell the truth about all other numbers. Again, assuming you chose 1 as your number, if the question is, "Today I picked the number 2," you would answer FALSE, because you did not choose that number and you should tell the truth about it. As you can see, sometimes you will need to answer TRUE, and sometimes you will need to answer FALSE.

Another way to think about it is this: You should deny choosing all numbers. For the numbers that you didn't pick, you should deny choosing them because that is the truth. For the number picked, you should deny choosing it because you are lying about.

When EyeDetect is used in a screening or investigation, there are real consequences for passing or failing the test. You might not get the job. You might go to jail. There is motivation for following instructions and "beating" the test. To give you some motivation, I am putting down \$20. If you follow instructions, and if EyeDetect can't correctly identify your number in the first or second position, the \$20 is yours. While you take the test, I will be observing to make sure you are following these instructions.

Now, choose a number between 2 and 9. While I look away, write that number down on the paper. Fold the paper over so no one can see it. Put it in your pocket.

Got your number? Keep it in your mind – don't forget it.