Testnaam: PhoEng:Sc 2015-2016 HD testing Datum: 11/24/2015

1. Is this statement true or false: "Feynman says that we can prove a law."

5/45 (A) True

37/45 (B) False

2. Does a positive outcome of a test prove the hypothesis? [a positive test means: that the outcome of a test agrees with the prediction]

6/45 (A) YES

38/45 (B) NO

If Yes (a positive test does prove the hypothesis), explain why?

3. If No (a positive test does not prove the hypothesis), explain why not?

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no because a single test cannot prove anything.

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You need infinitesimal test, to prove it right in all circumstances

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The hypothesis can be disproven by another test

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because tomorrow's experiments might prove the hypothesis wrong by contradicting it

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you test the two most likely (rival) hypothesis. might be that another on (which you didn't consider) is the true one

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Because you can't; you never know if there isn't one more experiment that will prove it wrong.

Einstein said 'A

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because there can exist a wider range of experiments to disprove the hypothesis.

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One can never be certain that the theory holds. However, you can get a degree of certainty (with which one can work).

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because this proves or not our beliefs and interpretation of phenomena.

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no, you only prove the hypothesis is not wrong in this particular test, there could be another test in the future, which can prove the hypothesis is wrong

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A positive test does not say every other test will also be positive.

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in the future, other experiments can be done which can prove the hypothesis wrong

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It has only not been disproven

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a hypothesis can only be proven to be wrong, if the test is wrong,

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because it does not guarantee that it cannot be proved wrong in the future

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No, other tests can prove that is it wrong.

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Other tests may be negative and therefore prove the hypothesis is wrong.

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No, it only proves it under the circumstances of the experiment, but never in the general case.

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Yes... because the results show the expected behavior.

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Another test might prove it wrong, so this test is not conclusive

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You can never be sure that there are no other tests with different results

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a guess can be proven wrong but a guess cannot proven correct in general. it just can be proven right for the experiment which was performed.

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Because we can only prove what is not. If there is a case where we have "proven" something it can be falsified by other evidence. Science is like a corrupted democracy

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The hypothesis can still be rejected by next observations

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A test will prove the hypothesis but it can prove it to be true and false as well depending ob the outcome

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No, an experiment has certain boundaries while a law should prove any case

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No, because a positive result does not say that for every example the test is right. So one simple example doesn't say anything about if a statement is true in general.

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for that specific context the hypothesis may be true, however this does not mean that the theory is true. only the outcome that support the hypothesis

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all the premises can be true but the conclusion can still be false.

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no, it can only show that it works for now and future experiments might still prove m wrong

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I've answered no because he says that the theory can always be disproven by new methods or insights (in the future)

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The test is just in line with the hypothesis. But is not a prove.

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positive results shows that the guess is right and can be applied

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No: A hypothesis can only be shown to be likely. It can never be fully proven. To fully prove something, it needs to be tested in/under infinitely many different ways/conditions

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Because you cannot be certain of the limits of an experience. It's much more easier to prove the opposite, i.e. it's more likely to say what's not possible than what is in fact possible.

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A HYPOTHESIS CAN BE PROVEN RIGHT, BUT THAT DOESN'T MEAN THE HYPOTHESIS IS RIGHT

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A future test might prove the hypothesis wrong, a test can never prove a hypothesis right, at most it can prove a hypothesis temporarily right.

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No, there could be other tests that would prove the hypothesis to be wrong.

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no, you can only test for a finite set of circumstances

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4. Feynman says that claims can be disproven. How can a claim be disproven?

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5. Can we disprove (= falsify) that flying saucers exist? If Yes: How? If No: Why not?