

Physics 102 – Spring 2014 – Recitation 1 TA notes

Imagine a tennis ball rolling gently on the floor near your feet. Let us suppose you are the first person to ever observe a tennis ball and you want to describe it for humanity.

Take a few minutes with a partner and write a short artistic description of the tennis ball. Share these with the larger group.

Take a few minutes with a partner and write a short scientific description of the tennis ball. Share these with the larger group.

Think for a minute and try to think of a few scientific controversies and list them as a group.

Obama passes Clinton in poll

■ McCain doesn't lead either Democrat in head-to-head survey.

SUSAN PAGE

USA TODAY

WASHINGTON

Democratic presidential hopeful Barack Obama has edged ahead of Hillary Rodham Clinton for the first time in a nationwide USA Today/Gallup Poll, which also shows Republican John McCain struggling to energize a dispirited GOP.

A different poll shows Clinton still ahead of Obama, however.

The surveys were released on the eve of primaries today in Virginia, Maryland and the District of Columbia. In both polls, McCain is running statistically even in a head-to-head contest against Clinton and slightly behind Obama.

In the USA Today poll, Obama bests Clinton 47 to 44 percent among Democrats and independents who lean Democratic.

On the trail Notes
from the campaign, 4A

Among Republicans, McCain leads Mike Huckabee 53 to 27 percent among Republicans and independents who lean Republican. The poll of 1,016 adults has a margin of error of plus or minus 3 percentage points for the full sample and

plus or minus 5 points for the Republican and Democratic subsamples.

The other poll released Monday, by the Associated Press-Ipsos, differed, showing Clinton leading Obama in the race for the Democratic nomination, 46 to 41 percent.

The AP-Ipsos survey of 1,029 adults was done Feb. 7-10. It had an overall margin of error of plus or minus 3.1 percentage points. □

Includes reporting by The Associated Press.



Some people believe talking to plants will help them grow. Is this a testable hypothesis? If you think so, design an experiment to test it.

What is astrology?

Take an anonymous poll:

How many of you (or a member of your immediate family) believe in astrology?

Why do you think people believe in astrology? Is astrology testable scientifically?

From <http://www.intelligentdesign.org/whatisid.php>

What is intelligent design?

Intelligent design refers to a scientific research program as well as a community of scientists, philosophers and other scholars who seek evidence of design in nature. The theory of intelligent design holds that certain features of the universe and of living things are best explained by an intelligent cause, not an undirected process such as natural selection. Through the study and analysis of a system's components, a design theorist is able to determine whether various natural structures are the product of chance, natural law, intelligent design, or some combination thereof. Such research is conducted by observing the types of information produced when intelligent agents act. Scientists then seek to find objects which have those same types of informational properties which we commonly know come from intelligence. Intelligent design has applied these scientific methods to detect design in irreducibly complex biological structures, the complex and specified information content in DNA, the life-sustaining physical architecture of the universe, and the geologically rapid origin of biological diversity in the fossil record during the Cambrian explosion approximately 530 million years ago.

Is intelligent design a scientific theory?

Yes. The scientific method is commonly described as a four-step process involving observations, hypothesis, experiments, and conclusion. Intelligent design begins with the observation that intelligent agents produce complex and specified information (CSI). Design theorists hypothesize that if a natural object was designed, it will contain high levels of CSI. Scientists then perform experimental tests upon natural objects to determine if they contain complex and specified information. One easily testable form of CSI is irreducible complexity, which can be discovered by experimentally reverse-engineering biological structures to see if they require all of their parts to function. When ID researchers find irreducible complexity in biology, they conclude that such structures were designed.

Consider the statements above and discuss