Q: a) How can 2+2=5?

Mathematically, 2 + 2 = 4. There is no way to make it equal 5 using standard arithmetic.

However, here are a few ways to think about how it could appear to be true:

Rounding: If you're working with numbers that are rounded, it's possible that 2.4 + 2.4 would round up to 5.

Trickery: There are mathematical "proofs" that appear to show 2 + 2 = 5, but they all contain a hidden error or a manipulation of the rules of mathematics. These are often used as puzzles or to illustrate the importance of careful reasoning.

Metaphorically: In some contexts, "2 + 2 = 5" is used as a metaphor to represent situations where the obvious answer is not necessarily the correct one. It might be used to describe situations where assumptions or external factors lead to unexpected results.

Let me know if you'd like to see an example of a "proof" that tries to show 2 + 2 = 5!

Q: b) Tell me about the falsification of big bang theory?

The Big Bang theory is not falsified. In fact, it's the most widely accepted scientific model for the origin and evolution of the universe.

Here's why:

Extensive Evidence: The theory is supported by a vast amount of observational evidence, including:

Cosmic Microwave Background Radiation: This faint afterglow of the Big Bang is detected throughout the universe and matches the theory's predictions.

Red Shift of Distant Galaxies: The further away galaxies are, the faster they seem to be moving away from us, consistent with an expanding universe.

Abundance of Light Elements: The Big Bang theory predicts the relative abundance of hydrogen, helium, and lithium in the universe, which matches what we observe.

Structure Formation: The distribution of galaxies and clusters of galaxies in the universe is consistent with the Big Bang theory's predictions about how structures form from initial fluctuations.

Ongoing Testing and Refinement: Scientists are constantly testing and refining the Big Bang theory

through observations and experiments. This process helps to solidify the theory's validity and also leads to new insights into the early universe.

No Viable Alternative: While some alternative theories exist, they haven't gained widespread acceptance due to lack of supporting evidence or inability to explain the observed universe as comprehensively as the Big Bang theory.

Important Note: There are some aspects of the Big Bang theory that are still being investigated, such as the nature of dark matter and dark energy, and the very early stages of the universe. This doesn't mean the theory is wrong, but rather that our understanding is still evolving.

Misconceptions:

It's important to distinguish between falsifying a theory and finding limitations in its explanatory power. There are still mysteries and open questions about the early universe that the Big Bang theory doesn't fully answer. However, these don't necessarily invalidate the theory, but rather highlight areas for further research and refinement.