The Theory of Everything public lecture series

**Many Worlds of Quantum Mechanics**

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Questions To Go

1. Can you use in court the weirdness of Quantum Mechanics?
   (a) Yes, but I have to explain QM first.
   (b) No, they will think that I am a psycho.

2. Should I be happy/unhappy about myself in other universes?
   (a) Yes, if I have nothing better to do.
   (b) No, I have enough to worry about here.

3. Should I be sad that I constantly die in parallel universes?
   (a) Yes, because it makes other people sad.
   (b) No, I am just happy that I am alive in some universe.

4. Can consciousness be described by classical/quantum physics?
   (a) Yes, everything is described by physics.
   (b) No, let me think and I will tell you why on Feb. 24.
HOMEWORK ASSIGNMENT

1. Remind yourself of what is a three-dimensional vector:

\[ \vec{A} = (A_1, A_2, A_3) \]

2. Make sure you know how to add vectors:

\[ \vec{A} + \vec{B} = (A_1, A_2, A_3) + (B_1, B_2, B_3) = (A_1 + B_1, A_2 + B_2, A_3 + B_3) \]

3. Learn how to multiply vectors (dot or scalar product):

\[ \vec{A} \cdot \vec{B} = (A_1, A_2, A_3) \cdot (B_1, B_2, B_3) = A_1B_1 + A_2B_2 + A_3B_3 \]

4. Be ready to imagine very large-dimensional vectors:

\[ \vec{A} = (A_1, A_2, A_3, A_4, A_5...) \]

5. And try not to panic when you see Greek letters \( \psi, \phi \) and weird notations for vectors \( |\psi\rangle \) instead of \( \vec{\psi} \)