Quiz
Anyons

Q1. How many types of particles are there in 2D?

1. 2 types: bosons and fermions.
2. There cannot be any particle in 2D.
3. 3 types: bosons, fermions, and Fibonacci anyons.
4. An infinite number of anyon types, in addition to bosons and fermions. (True)

Q2. Which pair of the following letters are topologically equivalent?

1. (T, Y) (True)
2. (P, B)
3. (C, R)
4. (W, O)

Q3. According to the quantum mechanics of exchanging two particles, how many types of particles do we have in 3D?

1. 2 types. (True)
2. 3 types.
3. 4 types.
4. 1 types.

Q4. According to Fibonacci fusion rules, which one of the following fusion processes is not true?

1. 1 x 0 = 0 (Checked)
2. 0 x 0 = 0
3. 0 x 1 = 1
4. 1 x 1 = 0

Q5. A pair of anyons are created from the vacuum. What is their total anyonic charge?

1. C = 2.
2. C = 0. (True)
3. We cannot say unless we fuse them.

Q6. How do we manipulate the state of anyons?

1. By applying a magnetic field on the system.
2. By controlling the spins of anyons with lasers.
3. By putting them close to each other.
4. By exchanging them. (True)

Q7. The F matrix is used to ...

1. Change the fusion order of anyons. (True)
2. Exchange anyons.
3. Compute the braiding operators. (True)