

Using the Bloch sphere to represent a qubit Quiz

Question 1

How many parameters are needed to describe a qubit state on the Bloch sphere?

- A. Two
- B. Four

Question 2

Which point on the Bloch sphere corresponds to the state $|0\rangle$?

- A. The North pole
- B. The South pole

Question 3

Which point on the Bloch sphere corresponds to the state $|1\rangle$?

- A. The North pole
- B. The South pole

Question 4

Compare the Bloch sphere to our Earth. You want to determine the longitude and latitude of your home town. Which answer is correct?

- A. The angle θ determines the longitude and the angle φ the latitude of your hometown.
- B. The angle θ determines the latitude and the angle φ the longitude of your hometown.

Question 5

Knowing the latitude and the longitude of a place on our Earth's surface is sufficient to unambiguously locate this place.

- A. True
- B. False