

Concept of State I

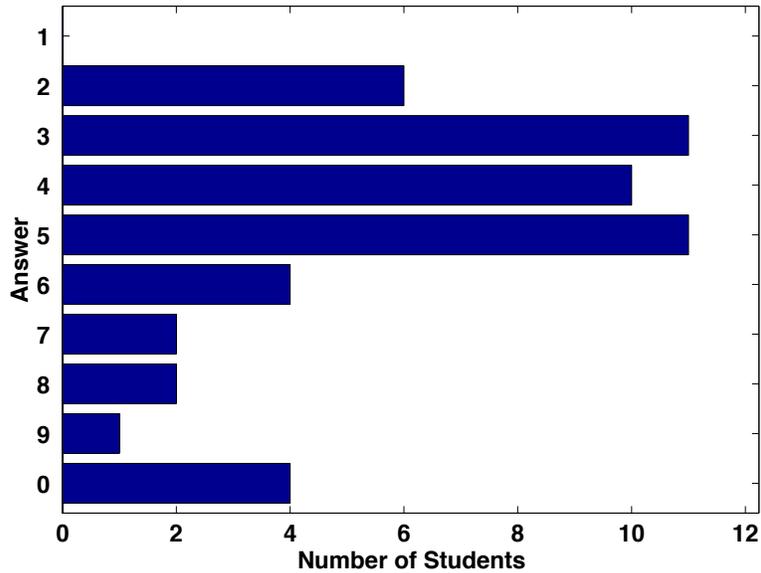
Concept Test

A basketball player shoots a basketball, and wants to predict (after she releases the ball) whether the ball will go into the basket. How many state variables must the player know in order to make an accurate prediction?

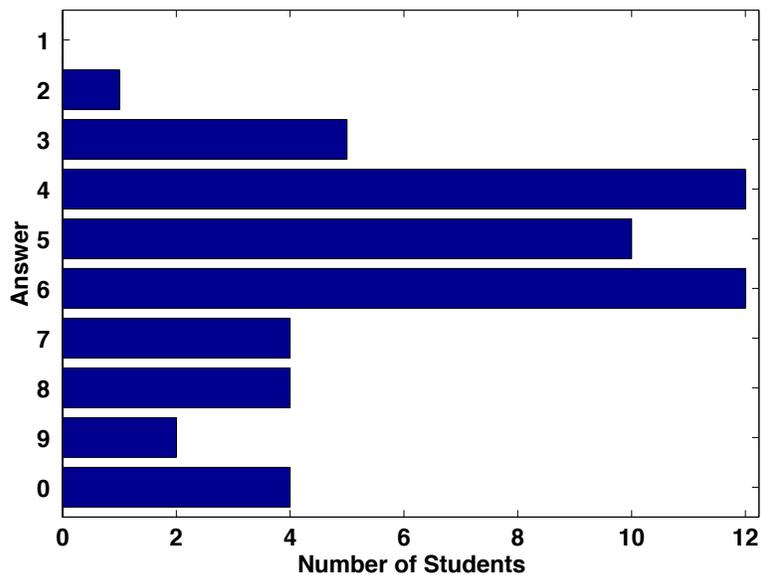
Enter the number of states, or 0 (zero) if the number of states is greater than 9.

Concept of State I Solution

Lecture S11: Concept of State I



Lecture S11: Concept of State I (2nd try)



The best answer is that there are nine state variables: the x , y , and z position of the ball; the three elements of the vector

velocity; and the three rotational rates. An OK answer is that there are six state variables: the three position and three velocity variables. However, spin is important for the bounce off the backboard.