

CS320N Sample midterm answers.

1. The penguin will move forward and into the cube. She will then turn 1 revolution, all the way around, and end up facing the camera as she is at the start. In the end the penguin is facing the camera as in the start and will be standing in side the cube.
2. When this code is executed the penguin will turn in a circle. By using the do together block forward keeps changing as the penguin turns. She will do a loop towards the cone, but end up at the same spot she started, facing the camera.
3. The penguin will move in a diagonal towards the sphere. She will end up closest to the sphere.
4. No, the end result would be the same in that case.
5.
 - A. The chicken moves forward 2 meters as well, since she is attached to the cow. (Vehicle property set to the cow.)
 - B. Nothing. The cow stays in place.
6. Can't convey this answer in text. The penguin does a half circle and ends up to the right of the cone (from the camera's perspective) with her back to us. She will then do a small circle around the sphere and end up back at the same spot. The she does another half revolution and ends up back at here starting point. So the overall move is a small circle inside a bigger circle.
7. function returns false in this case
8. evaluates to false (both parts are false)
9. evaluates to true (both parts are true)
10. Total distance moved is 5 meters forward.
11. Total distance moved is 10 meters forward.
12. Total distance moved is 20 meters forward.
13. The penguin moves forward a total of 30 meters. Penguin moves well past the chicken, 20 meters away. (loop executes 10 times)
14. The penguin does a box pattern. It moves forward then turns right 10 times. After 4 times it completes a box and is back where it started, After another 4 it completes another box. It does two more legs so it will end 3 meters forward and then three meters to the right of where it started.
15. Yes, the loop will eventual en. The penguin is only moving between .5 meters and 1.5 meters while the chicken keeps turning to face the penguin and moves at 2 meters each time. The penguin will average 1 meter per move, while the chicken always moves 2 meters closer. If the chicken started out 10 meters away it will take an average of 8 moves to stop the loop, although it could be more.