Jeroo Control Structures

Section 4.1 Control Structures

1. What is a sequential control structure?

2. What is a repetition control structure?

3. What is a selection control structure?

4. What is a condition?

5. What is the difference between a pretest loop and a posttest loop?

6. What is the only repetition(looping) structure used by the Jeroo language?

Section 4.2 Sensor Methods

7. What is a sensor method?

8. Any expression that produces either true or false is called a _____ expression.

9. Assume that there is a Jeroo named bill. Write the line of code that will send a message to bill asking him if there is a flower to his right?

Section 4.3 Repetition

10. Assume that there is a Jeroo named karen and she has 20 flowers in her pouch. There is a row of 15 nets directly ahead of her. Write a while loop that will allow her to remove all of nets then stop.

Section 4.4 Selection

11. Assume there is a Jeroo named joe. Write an if statement that checks to see if joe is standing on a flower. If he is standing on a flower he needs to pick it up. He also needs to turn around and face the opposite direction whether or not he picks a flower up.

12. Assume there is a Jeroo named joe. Write an if/else statement that checks to see if joe has a flower in his pouch. If he does have a flower in his pouch he needs to hop 5 spaces forward, otherwise he needs to turn around and hop 5 spaces in the opposite direction.

13. Assume there is a Jeroo named joe and he has 5 flowers in his pouch. Write a series of if statements that will allow joe to disable the surrounding nets. If there is a net directly in front of him he needs toss a flower on it. If there is a net to his right he needs to turn to his right, toss a flower on the net, and turn back to his left. If there is a net to his left he needs to turn to his left, toss a flower on the net, and turn back to his right. This code should enable joe to disable 0, 1, 2, or 3 nets.

14. Assume there is a Jeroo named joe. Write a cascading if statement that will allow joe to determine if there is either a net or flower directly in front of him. If there is a net in front of him he needs to turn around and face the opposite direction, else if there is a flower in front of him he needs to hop forward one space and pick the flower up, otherwise he needs to just hop 5 spaces forward.

Section 4.5 Compound

15. Assume there is a Jeroo named joe. Write a while loop that will allow him to hop forward until he reaches the water. (Use the negation operator – while there is **not** any water hop forward)

16. Assume there is a Jeroo named joe. Write an if/else statement that determines if joe has a flower in his pouch **and** there is a net directly in front of him. If this condition is true he needs to toss a flower on the net to disable it, otherwise he needs to turn around in the opposite direction and hop forward three spaces.

17. Assume there is a Jeroo named joe. Write and if statement that determines if there is either a net **or** water directly in front of him. If this condition is true he needs to turn around and face in the opposite direction.

18. Assume there is a Jeroo named joe. Write an if/else statement that determines if there is water directly in front of him **and** there is **not** a net to his right. If this condition is true he needs to turn to his right and hop forward one space, otherwise he just needs to hop forward one space without turning.