

19. What's the difference between a for loop and a while loop?

The main difference between a for loop and a while loop is how many times they repeat. A for loop has a set number of iterations, whereas a while loop can have an unknown number of iterations. A for loop has built in variables that it declares.

22. What's the difference between parameters and arguments?

Arguments are the values of a function when it is called. An example would be "function(**12, 3**);"
Parameters are the values in the created function. An example would be "int function(**int value1, int value2**);"

25. What's the difference between a class and an object?

A class is a template or blueprint that is used to create objects. Classes are declared once so it is easier to create multiple objects.

26. What is a constructor function? What does it do and when?

A constructor is part of a class that has the same name as it and it has no return type. Constructor functions are used to initialize objects and it is called when an object of the class is initialized.

27. Why should each class have its own tab in Processing?

The main reason for creating new tabs for each class is organization. It creates a clear separate spot where the class is and makes it clearer for the programmer.

31. What's the difference between an array and an ArrayList?

An array has a set size whereas an ArrayList changes size depending on how many elements are added. ArrayLists are more dynamic and have many functions that make it easier for programmers. Such as .remove() or contains().

32. Why would you want to go through a list backwards, decrementing the index?

Working backwards through a list can create fewer out of bounds errors. An example could be working through a list and deleting certain items. If going through it forwards, when an item is deleted because the list will now go above the number of items. If going through the backwards, it will iterate towards zero which will always have a value.

37. When should you use PVector instead of float variables?

PVectors can store multiple values, such as storing both x and y values. Whereas float variables can only store one value. PVectors are helpful when you want to store multiple values.

42. What is a normalized vector, why is it useful?

A normalized vector is a vector that's magnitude has been scaled to 1 but keeps the same direction of the vector. Normalizing vectors makes comparisons between vectors easier because now only the directions will be different, length will all be the same.