

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

A while loop is used when you want the code to run until the conditions for that code to run are no longer met. As long as the conditions are right, the loop will run. A for loop is used when you want the code to repeat a known number of times, and stop when that number has been reached.

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

Parameters are the variables declared in a function, for example, when writing a function to draw a shape some parameters may be the x and y positions and the shape's width and height. Arguments are the actual values that are declared when a function is called, so in the case of a function to draw a shape the arguments would be the values representing the shape's position and size.

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

A class is the code that describes how an object should be. It tells the program how to make the object. An object is a specific instance of the code in the class.

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

A constructor function sets all the values of an object. It is called when creating a new instance of an object.

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

Each class should have its own tab to keep the code organized. It keeps each main section of code separate so things are easier to find. Keeping each class in its own tab allows you to only have the relevant code in the tab, which makes the code easier to read and edit.

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

An array is used when the number of items in the array is known. An ArrayList is used when the number of items in the array is not known, or when the number of items will be changing. An ArrayList can be added to or removed from easily, whereas the number in an array stays the same.

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

Going through a list backwards is useful when you want to execute something backwards. For example, if you wanted something like a score to count backwards or wanted to play an animation backwards.

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

Using PVector allows you to change things about the vector such as position and velocity much easier than changing x and y values. PVectors also allow you to implement things like acceleration easily. It also makes the code more readable, for example referencing the location of the vector rather than having to reference specific x and y coordinates.

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

A normalized vector is a vector with a length of one. It is useful when the magnitude of the vector doesn't really matter, but you want to find the direction.

