

# AP CS: Lesson 12: While Loops & Fenceposts

Name: \_\_\_\_\_ Period: \_\_\_\_\_

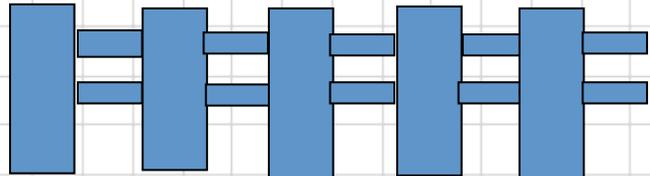
## Java Syntax:

### Fencepost Loop:

Adds a statement outside the loop to place the initial "post." Also called a fencepost loop or a "loop-and-a-half" solution.

**place a post.**

```
for (length of fence - 1) {  
    place some wire.  
    place a post.  
}
```



```
public static void printNumbers(int max) {  
    System.out.print(1);  
    for (int i = 2; i <= max; i++) {  
        System.out.print(", " + i);  
    }  
    System.out.println(); // to end the line  
}
```

**definite loop:** Executes a known number of times. (i.e. most counting for loops)

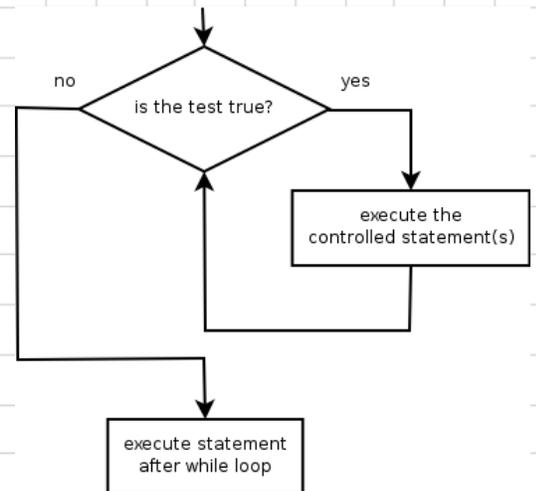
**indefinite loop:** One where the number of times its body repeats is not known in advance.

### while Loop:

```
while (test) {  
    statement(s);  
}
```

### while loop Example:

```
int num = 1; // initialization  
while (num <= 200) { // test  
    System.out.print(num + " ");  
    num = num * 2; // update  
}
```



**Sentinel value:** A value that signals the end of user input.

**Sentinel loop:** Repeats until a sentinel value is seen.

**Math.random()** generates **pseudo-random** numbers, a double between 0 (inclusive) and 1 (exclusive). Can be used to generate any random range by appropriate multiplication and casting to an (int).

## Class Notes:

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**Exit Ticket - Please answer and return at end of period. Thanks.**

1. I understand how to use String methods:  Yes  Somewhat  No
2. I understand how to use char within a String:  Yes  Somewhat  No
3. I understand how to prevent a "Fencepost" condition:  Yes  Somewhat  No
4. I understand how to use to while loop:  Yes  Somewhat  No

Additional comments, especially if you answered "No" to any of the above what would you like to more details on? Thanks

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