

1. Which of the following declaration statements create a reference type? (Check all that are correct.)

Reference type is stored in the heap
Value type (primitive) is stored in the stack
int[] myArray; -- stored in the heap

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21/22 Students Answered

A int x = 5;

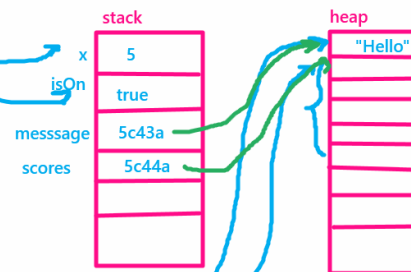
B boolean isOn = true;

C string message = "Hello";

D int[] scores = new int[5];

E I don't know.

No Explanation



3. When a reference variable does not point to an object, its value is null.

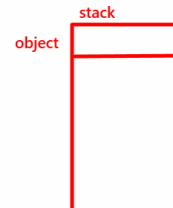
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generic variable	ⓧ
null	ⓧ
null	ⓧ
null	ⓧ
null	ⓧ
null	ⓧ
null	ⓧ
null	ⓧ
primitive	ⓧ
null	ⓧ
null	ⓧ
null	ⓧ
null	ⓧ
K.S., IT	ⓧ

MyClass object;



not until you finish:
object = new MyClass(); this is when reference to heap is added to stack

4. You can not change the value of a string. due to immutability

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True true

False

No Explanation

String name = "Margaret";

name = "Bob";

5. String s1 = "ALL MEN ARE CREATED EQUAL";
String s2 = s1.substring(16, 19);

System.out.println(s2);

What is the output of the preceding code snippet?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
ALL MEN ARE CREATED EQUAL

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b2 = TED

- 16, 19
- AD
- TED
- TE
- TED
- TED

6. char[] awesomeArray = new char[] { 'A', 'w', 'e', 's', 'o', 'm', 'e' };
String awesomeString1 = new String(awesomeArray);
String awesomeString2 = new String(awesomeArray);

boolean areEqual = awesomeString1 == awesomeString2;

What is the value of the *areEqual* variable after this code executes?

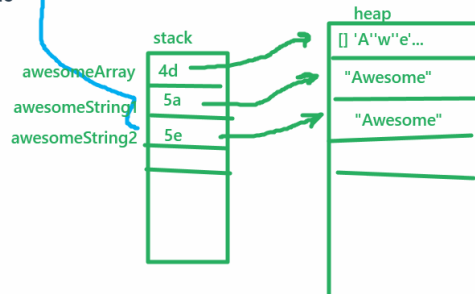
== does not work with reference types (does not work with Strings)

.equals method needs to be done for reference types.

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- A true
- B false
- C I don't know
- D No Explanation



```
public String stringX(String str) {
    String result = ""; // to hold my answer
    // if str contains 1 char, just return it. if str contains 2 chars, just
    return it. EDGE CASES!
    if (str.length() <= 2){
        return str;
    }
    // we know to reach this spot in the code, we must have at least 3 chars
    in str
    result += str.charAt(0); // whether 'x' or not, we keep the first char
    // i starts with 1 because we have handled index 0 with line above
    for (int i = 1; i < str.length() - 1; i++){ // condition will stop 1 char
    before last, so we can save that if 'x'
        if (str.charAt(i) != 'x'){
            result += str.charAt(i);
        }
    }
    // now have to append the last char
    result += str.charAt(str.length() - 1); // add last char whether 'x' or
    not
}
```

```
    return result;  
}
```