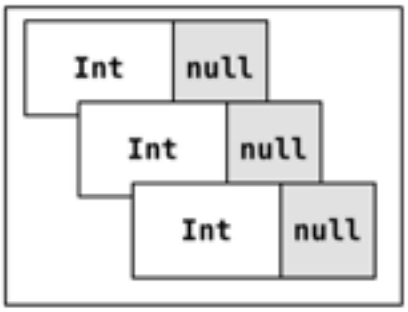
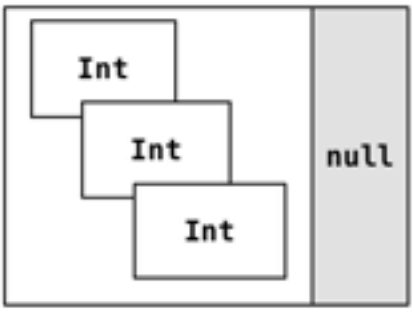
1. Which line(s) won't compile?

```
1  class Name(val value: String?)

2  fun isFoo1(n: Name) = n.value == "foo"
3  fun isFoo2(n: Name?) = n.value == "foo"
4  fun isFoo3(n: Name?) = n != null && n.value == "foo"
5  fun isFoo4(n: Name?) = n?.value == "foo"

6  fun main(args: Array<String>) {
7      isFoo1(null)
8      isFoo2(null)
9      isFoo3(null)
10     isFoo4(null)
11 }
```

2. Add question marks when necessary to make the code compile.



List<Int?>



List<Int>?

```
1  fun foo(list1: List<Int?>, list2: List<Int>?) {
2      list1.size
3      list2.size

4      val i: Int  = list1.get(0)
5      val j: Int  = list2.get(0)
   }
```

3. Implement an extension function `isNullOrEmpty` on the type `String?`. It should return `true`, if the string is empty or `null`.

```
val s1: String? = null
val s2: String? = ""
println(s1.isNullOrEmpty() && s2.isNullOrEmpty())   // true
```

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4. Type cast **`as`** throws `ClassCastException`, if the cast is unsuccessful. Safe cast **`as?`** returns **`null`**, if the cast is unsuccessful. In which of the following cases the exception will be thrown?

```
val i = null
println(i as Int)
println(i as Int?)
println(i as? Int)
```

5. Declare the **`i`** variable to make the first line throw an exception and the second line print `null`.

```
_____________________________
println(i as Int?)
println(i as? Int)
```