

AP[®] COMPUTER SCIENCE A 2017 SCORING GUIDELINES

Question 2: MultiPractice

Class:	MultiPractice	9 points
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Intent: Define implementation of class to produce multiplication practice problems

- +1** Declares header: `public class MultiPractice implements StudyPractice`
- +1** Declares all necessary `private` instance variables
- +2** Constructor
 - +1** Declares header: `public MultiPractice(int __, int __)`
 - +1** Initializes all instance variables using parameters
- +3** `getProblem` method
 - +1** Declares header: `public String getProblem()`
 - +1** Builds string with current values of instance variables
 - +1** Returns constructed string
- +2** `nextProblem` method
 - +1** Declares header: `public void nextProblem()`
 - +1** Updates instance variable(s) to reflect incremented second number

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Question 2: Scoring Notes

Class MultiPractice			9 points
Points	Rubric Criteria	Responses earn the point if they ...	Responses will not earn the point if they ...
+1	Declares header: <code>public class MultiPractice implements StudyPractice</code>	omit keyword <code>public</code>	declare class <code>private</code>
+1	Declares all necessary <code>private</code> instance variables	declare the unchanging instance variable as <code>final</code>	- declare variables as <code>static</code> - omit keyword <code>private</code>
+2	Constructor		
+1	Declares header: <code>public MultiPractice (int __, int __)</code>	omit keyword <code>public</code>	
+1	Initializes all instance variables using parameters		- fail to declare nonlocal variables - initialize local variables instead of instance variables - assign variables to parameters
+3	<code>getProblem</code> method		
+1	Declares header: <code>public String getProblem()</code>		fail to declare method <code>public</code>
+1	Builds string with current values of instance variables	- write appropriate code in a method other than <code>getProblem</code> - make capitalization or spacing errors	- fail to declare nonlocal variables - fail to use instance variables - miscast <code>(String) intVar</code> - call <code>intVar.toString()</code>
+1	Returns constructed string		return a literal string
+2	<code>nextProblem</code> method		
+1	Declares header: <code>public void nextProblem()</code>		fail to declare method <code>public</code>
+1	Updates instance variable(s) to reflect incremented second number		fail to declare non-local variables

**AP[®] COMPUTER SCIENCE A
2017 SCORING GUIDELINES****Question 2: MultiPractice**

```
public class MultiPractice implements StudyPractice
{
    private int first;
    private int second;

    public MultiPractice(int num1, int num2)
    {
        first = num1;
        second = num2;
    }

    public String getProblem()
    {
        return first + " TIMES " + second;
    }

    public void nextProblem()
    {
        second++;
    }
}
```