

CSE110 Review Questions (Solutions)

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1 Static Variables and Methods

Question 1 What is a static variable? What is a static method?

Answer: A static variable is shared among all instances of a class. A static method is invoked using the class name.

Question 2 Using the code below, how many copies of the variable number exist after instantiating 374 different AmazingClass objects?

```
public class AmazingClass {
    private static int number;

    public AmazingClass(int a) {
        number = a;
    }

    public int twice() {
        number *= 2;
        return number;
    }
}
```

Answer: 1

Question 3 Using the code from above, what is the value of number after each of the following statements? (For each part, assume the preceding parts have already been executed).

```
AmazingClass ac1 = new AmazingClass(3);
AmazingClass ac2 = new AmazingClass(7);
ac1.twice();
ac2.twice();
```

Answers:

3

7

14

28