**TASK-6.0**

Please read the source code below and try to understand what it does.

**void** addNumber(**double** x) {

**if** ((**long**) x == x) {

**long** value = (**long**) x;

**long** mantissa = value;

**int** exp = 0;

**if** (Math.*abs*(x) >= 100) {

**while** (mantissa / 10 \* Math.*pow*(10, exp + 1) == value) {

mantissa /= 10;

exp++;

}

}

**if** (exp > 2) {

add(Long.*toString*(mantissa) + "E" + Integer.*toString*(exp));

} **else** {

add(Long.*toString*(value));

}

} **else** {

add(String.*valueOf*(x));

}

}

**Q.6.0. How well do you think you understand the code?**

* Well
* Not so well

**TASK-6.1**

However, this same code is failing.

**Failure Message:**

junit.framework.ComparisonFailure: expected:<var x=[-0.]0> but was:<var x=[]0>

**Test:**

assertPrint("var x = -0.0;", "var x=-0.0");

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We will ask you **four different** questions about the **same code** with the **same failure** above.

**Q.6.1. Do you think that something in the highlighted code causes the failure?**

* Yes
* No

**void** addNumber(**double** x) {

**if** ((**long**) x == x) {

**long** value = (**long**) x;

**long** mantissa = value;

**int** exp = 0;

**if** (Math.*abs*(x) >= 100) {

**while** (mantissa / 10 \* Math.*pow*(10, exp + 1) == value) {

mantissa /= 10;

exp++;

}

}

**if** (exp > 2) {

add(Long.*toString*(mantissa) + "E" + Integer.*toString*(exp));

} **else** {

add(Long.*toString*(value));

}

} **else** {

add(String.*valueOf*(x));

}

}

**Q.6.2 How confident are you that your answer is correct?**

* Confident
* Not so confident

**TASK-6.2**

**Failure Message:**

junit.framework.ComparisonFailure: expected:<var x=[-0.]0> but was:<var x=[]0>

**Test:**

assertPrint("var x = -0.0;", "var x=-0.0");

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**Q.6.3. Do you think that something in the highlighted code causes the failure?**

* Yes
* No

**void** addNumber(**double** x) {

**if** ((**long**) x == x) {

**long** value = (**long**) x;

**long** mantissa = value;

**int** exp = 0;

**if** (Math.*abs*(x) >= 100) {

**while** (mantissa / 10 \* Math.*pow*(10, exp + 1) == value) {

mantissa /= 10;

exp++;

}

}

**if** (exp > 2) {

add(Long.*toString*(mantissa) + "E" + Integer.*toString*(exp));

} **else** {

add(Long.*toString*(value));

}

} **else** {

add(String.*valueOf*(x));

}

}

**Q.6.4. How confident are you that your answer is correct?**

* Confident
* Not so confident