

Question 1

[2 marks]

What is the value of `x` after the following code has been executed?

```
int x = 1;

while (x < 10) {
    x = x * 2;
}
```

Answer: 16

Question 2

[2 marks]

Arithmetic operators, like `+` and `*`, require that both of their arguments are of the same type; the value each returns is of the same type as its arguments. In other words, the type of `(3+5)` is `int`, while the type of `(3.0+5.0)` is `double`.

In light of this, explain why it is not an error to write `(3+5.0)`, an expression which mixes values of different types.

3 is coerced (replace by) its double equivalent, 3.0, so that the addition is performed on two double values.

Question 3

[2 marks]

Write Java code which declares `names` to be a `java.util.ArrayList` of `String` objects.

```
java.util.ArrayList<String>
```

Question 4

[2 marks]

Assuming `names` has been declared to be a `java.util.ArrayList` of `String` objects, write Java code to initialize `names` to a `java.util.ArrayList` of `String` objects.

```
names = new java.util.ArrayList<String>();
```

Question 5

[6 marks]

Assuming that `names` is a `java.util.ArrayList` of `String` objects, write Java code to insert the following Strings into `names`: "Fred", "Wilma", "Betty", and "Barey".

```
names.add("Fred");
names.add("Wilma");
names.add("Betty");
names.add("Barney");
```

Question 6

[6 marks]

Assuming that `names` is a `java.util.ArrayList` of `String` objects, write a *foreach* loop to print, using `System.out.println`, each item in `names`

```
for (String name : names) {
    System.out.println(name);
}
```

SOLUTION #10 — 2.5%

Name (print, surname first): _____

Monday, December 3 [version 1 of 2]

Signature: _____

15 minutes

Person #: _____

 A1 (T@8) A2 (W@4) A3 (R@12) A4 (W@8)

This assessment has 2 pages. Check that you have a complete paper.

Each candidate should be prepared to produce, upon request, his or her SUNY/UB card.

This examination has 6 questions. Answer all 6 questions.
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Do not write below this line!

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Question	Points
1	/2
2	/2
3	/2
4	/2
5	/6
6	/6
TOTAL	/20