COMP101 - Practice Quiz 00 Name: _____ PID: _____

1. Consider the following code listing.

```
let a = "1";
let b = 2;
let c = true;
let d = a + a;
let e = b + b;
let f = a + b + a;
```

1.1 What is `a`'s data type?

1.2 What is `b`'s data type?

1.3 What is `c`'s data type?

1.4 What is `d`'s data type?

1.5 What is `d`'s initialized value?

1.6 What is `e`'s data type?

1.7 What is `e`'s initialized value?

1.8 What is `f`'s data type?

1.9 What is `f`'s initialized value?

2. Respond with what each expression evaluates to.

2.1 `5 - 6 + 1`

2.2 `2 ** 4`

2.3 `1 + 3 ** 2`

2.4 `10 % 4`

2.5 `6 - 4 % 2`

3. Consider the following code listing. For each of the conceptual terms which follow, identify the line number which each term occurs on. Line numbers are listed to the left of each line. If a concept appears on more than one line, you only need to identify a single line which it occurs on. If a concept does not oocur at all, write in "N/A".

```
1 let a: number;
2 let b = "3";
3 // a = 1;
4 a = 2;
5 // a = 3;
6 a = a * a;
7 b = b + b;
8 print(a);
9 print(b);
```

3.1 Variable Initialization

3.2 Variable Access

3.3 Addition Operator

3.4 Concatenation Operator

3.5 Variable Assignment that *is not* Initialization

3.6 Code Comment

3.7 Variable Declaration

3.8 When `a` is printed, what is `a`'s value?

3.9 When `b` is printed, what is `b`'s value?

4. There are three similar, but different, code listings below. Assume each is evaluated by a processor independent of the others. Fill in the values of the variables `a` and `b` after each completes.

```
1 let a = 0;
2 let b = 1;
3 b = a;
4 a = b;
```

a	b

```
1 let a = 2;
2 let b = 3;
3 let temp = b;
4 b = a;
5 a = temp;
```

a	b

```
1 let a = 4;
2 let b = 5;
3 let temp = b;
4 a = temp;
5 b = a;
```

a	b

5. Describe the meaning of the statement below in English.

```
let x:  number = 1;
```

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1. Consider the following code listing.

```
1 let a = "1";
2 let b = 2;
3 let c = true;
4 let d = a + a;
5 let e = b + b;
6 let f = a + b + a;
```

1.1 What is a's data type? string
1.2 What is b's data type? number
1.3 What is c's data type? boolean
1.4 What is d's data type? string
1.5 What is d's initialized value? "11"
1.6 What is e's data type? number
1.7 What is e's initialized value? 4
1.8 What is f's data type? string
1.9 What is f's initialized value? "121"

2. Respond with what each expression evaluates to.

2.1 `5 - 6 + 1` 0
2.2 `2 ** 4` 16
2.3 `1 + 3 ** 2` 10
2.4 `10 % 4` 2
2.5 `6 - 4 % 2` 6

3. Consider the following code listing. For each of the conceptual terms which follow, identify the line number which each term occurs on. Line numbers are listed to the left of each line. If a concept appears on more than one line, you only need to identify a single line which it occurs on. If a concept does not oocur at all, write in "N/A".

```
1 let a: number;
2 let b = "3";
3 // a = 1;
4 a = 2;
5 // a = 3;
6 a = a * a;
7 b = b + b;
8 print(a);
9 print(b);
```

3.1 Variable Initialization 2 or 4
3.2 Variable Access 6, 7, 8, or 9
3.3 Addition Operator N/A
3.4 Concatenation Operator 7
3.5 Variable Assignment that *is not* Initialization 6 or 7
3.6 Code Comment 3 or 5
3.7 Variable Declaration 1 or 2
3.8 When a is printed, what is a's value?
4
3.9 When b is printed, what is b's value?
''33''

4. There are three similar, but different, code listings below. Assume each is evaluated by a processor independent of the others. Fill in the values of the variables `a` and `b` after each completes.

```
1 let a = 0;
2 let b = 1;
3 b = a;
4 a = b;
```

a	b
0	0

```
1 let a = 2;
2 let b = 3;
3 let temp = b;
4 b = a;
5 a = temp;
```

a	b
3	2

```
1 let a = 4;
2 let b = 5;
3 let temp = b;
4 a = temp;
5 b = a;
```

a	b
5	5

5. Describe the meaning of the statement below in English.

```
let x:  number = 1;
```

Declare a number variable named x, and assign / initialize it with value 1.