

QUIZ 3: Practice

Name: _____

Instructions:

1. Don't forget to **put your name on the quiz** (above).
2. Please write your answers in **clear handwriting**. If you write more than one answer to a problem, circle the one that you would like for me to grade.
3. Be aware of the time as you work on the quiz.
4. Don't forget that there is also a coding portion of this quiz (the take-home part). The written portion is only part of the quiz!
5. Please **show your work** so that I can give you partial credit. Some of these questions are prone to arithmetic mistakes, so the more you communicate your process, the better I am able to give you credit for what you do know.
6. Do your best and good luck! You will have another chance to take this quiz in a few weeks, so no stress.

GRADE: (Sarah will fill this out)

Problem	Score	Possible Points
Problem 1		5
Problem 2		2
Problem 3		2
Problem 4		6
Problem 5		5
Problem 6		5
Problem 7		5
Problem 8		6
Problem 9		4
Total		40

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Problem 1. (5 points)

For each of the following statements, please specify the value and the data type of result:

(a) `let result = true || (false && true);`

What is the value of result?

What is the data type of result?

(b) `let result = 6 % 5;`

What is the value of result?

What is the data type of result?

(c) `let result = 6 / 2 ** 2;`

What is the value of result?

What is the data type of result?

(d) `let myList = [6, 2, 17, 9, 3];`
`let result = myList[myList[4]];`

What is the value of result?

What is the data type of result?

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(e) `let myList = [[100, 150], [200, 200], [300, 250]];`
`let result = myList[1];`

What is the value of `result`?

What is the data type of `result`?

Problem 2. (2 points)

Answer the following questions, given the variable `artist`:

```
const artist = {  
  nickname: 'J-Hope',  
  name: { english: 'Jung Ho Seok', korean: '정호석' },  
  specialties: ['rapper', 'dancer', 'vocalist']  
};
```

(a) `let result = artist.specialties;`

What is the value of `result`?

What is the data type of `result`?

(b) `let result = artist.name.english;`

What is the value of `result`?

What is the data type of `result`?

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Problem 3. (2 points)

Consider the following:

```
let a = 150;  
let b = 200;  
let c = false;  
let result = (a < b) && !c;
```

What is the value of **result**?

What is the data type of **result**?

Problem 4. (6 points)

Consider the following snippet of code)...

```
let a = 1;  
let b = 2;  
while (b < 15) {  
  a *= 2;  
  b += a;  
  console.log(a, b);  
}
```

Write what will be printed to the console after this code block executes:

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Problem 5. (5 points)

Consider the following program, where days of the week are represented by integers (1=Monday, 2=Tuesday, 3=Wednesday, ... , 7=Sunday):

```
function printMessage(day) {  
    if (day >= 5) {  
        console.log("It's the weekend!!");  
    } else if (day == 5) {  
        console.log("We're going on a field trip!");  
    } else if (day % 2 == 0) {  
        console.log("Today we're studying English and Math");  
    } else {  
        console.log("Today we're studying History and Science");  
    }  
}  
  
printMessage(5); // print message for friday
```

(a) What will print to the console?

(b) If you answered part (a) correctly, you will note that the code has a “bug” (logic error). How would you fix the **printMessage** function body so that it printed “*We’re going on a field trip!*” (the correct message associated with Friday) instead?

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Problem 6. (5 points)

Consider the following snippet of code....

```
const myList = [  
  'Lucy', 'Charlie', 'Isha', 'Ling', 'Isiah',  
  'Francisco', 'Ana', 'Batuhan', 'Keira', 'Maya'  
];  
for (let i = 0; i < myList.length; i += 4) {  
  console.log(myList[i]);  
}
```

Write what will be printed to the console after this code block executes:

Problem 7. (5 points)

Consider the following snippet of code....

```
const myList = [  
  'Lucy', 'Charlie', 'Isha', 'Ling', 'Isiah',  
  'Francisco', 'Ana', 'Batuhan', 'Keira', 'Maya'  
];  
for (let i = myList.length - 1; i >= 0; i -= 3) {  
  console.log(myList[i]);  
}
```

Write what will be printed to the console after this code block executes:

Problem 8. (6 points)

Consider the following snippet of code....

```
function func1(a, b) {  
    return (a + b) / 2;  
}  
  
function func2(a, b) {  
    return a % b;  
}  
  
let x = func1(3, 2 + 3);  
let y = func2(4, 3);  
let z = func1(y, func2(3, 2));
```

What will happen when this code is executed? If information prints to the screen, write what the output would be below (don't forget to show your work):

What is the value of x?

What is the value of y?

What is the value of z?

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Problem 9. (4 points)

The final questions should be answered given the variable **btsMembers**:

```
const btsMembers = [
  {
    nickname: 'RM',
    name: { english: 'Kim Nam Joon', korean: '김남준' },
    specialties: ['leader', 'rapper']
  },
  {
    nickname: 'Jin',
    name: { english: 'Kim Seok Jin', korean: '김석진' },
    specialties: ['visual', 'vocalist']
  },
  {
    nickname: 'Suga',
    name: { english: 'Min Yoon Gi', korean: '민윤기' },
    specialties: ['rapper']
  },
  {
    nickname: 'J-Hope',
    name: { english: 'Jung Ho Seok', korean: '정호석' },
    specialties: ['rapper', 'dancer', 'vocalist']
  },
  {
    nickname: 'Jimin',
    name: { english: 'Park Ji Min', korean: '박지민' },
    specialties: ['vocalist', 'dancer']
  },
  {
    nickname: 'V',
    name: { english: 'Kim Tae Hyung', korean: '김태형' },
    specialties: ['dancer', 'vocalist', 'visual']
  },
  {
    nickname: 'Jungkook',
    name: { english: 'Jeon Jeong-guk', korean: '전정국' },
    specialties: ['vocalist', 'dancer']
  }
];
```

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- (a) What is the data type of **btsMembers**?
- (b) Using the **btsMembers** variable, how would you output the nickname of the **third BTS band member** to the console? Write the code below:
- (c) Using the **btsMembers** variable, how would you output the Korean spelling of the **sixth BTS band member's name** to the console? Write the code below:
- (d) Using the **btsMembers** variable, how would you output the first specialty of the **second BTS band member** to the console? Write the code below: