

Game Development Test #1

Part 1: Arithmetic & Boolean problems (5pts)

You will be presented with five different Arithmetic / Boolean problems, each one is worth 1pt.
Answer the question in the premade comment section.

```
//Part 1 (1pt) =====  
//Question: What is the value of x?  
  
int x = -1;  
int y = 0;  
int z = 20;  
  
y = 10 + 5;  
z /= 10;  
x += y + z;  
  
// Answer: x =  
//=====
```

```
//Part 2 (1pt) =====  
//Question: What is the value of isTrue at the end of this?  
  
bool isTrue = true;  
x = 144 / 12;  
y = 48 / 4;  
isTrue = x == y;  
  
// Answer: isTrue =  
//=====
```

```
//Part 3 (1pt) =====  
//Question: What is the value of x at the end of this for loop?  
  
x = 0;  
for (int i = 0; i < 10; i++)  
{  
    x += i;  
}  
  
// Answer: x =  
//=====
```

```
//Part 4 (1pt) =====
//Question: What is the value of x after this if statement?

x = 0;
string name = "Ash";
if (name.Length > 5)
{
    x = 1;
}
else if (name == "Ketchum")
{
    x = 2;
}
else if (name.Length < 5)
{
    x = 3;
}
else if (name.Contains("A"))
{
    x = 4;
}
else
{
    x = 5;
}

// Answer: x =
//=====
```

```
//Part 5 (1pt) =====
//Question: What is the result of this for loop?

int[] a = new int[3] { 1, 3, 5 };
for (int i = 0; i < 10; i++)
{
    a[i] = i;
}

// Answer:
//=====
```

Part 2: Loops, Arrays, & Lists (4pts)

You will be presented with two problems each one is worth 2pts. You will have to create a loop that parses through a given array or list save data into another variable.

```
//Using a loop copy even numbers that are under value of 30
//from the array to the list. (2pts)
//Your list should have these values: 22, 2, 12
Unity Message | 0 references
void Start()
{
    int[] array = new int[10] { 22, 58, 7, 91, 23, 354, 1, 2, 40, 12 };
    List<int> list = new List<int>();
}
```

```
//Using a loop add up values from list that are even into the variable sum.
//The value of sum should be 156 at the end of this loop. (2pts)
Unity Message | 0 references
void Start()
{
    List<int> list = new List<int> { 11, 2, 5, 4, 5, 6, 217, 8, 119, 10, 11, 12,
    133, 14, 15, 16, 117, 18, 19, 20, 291, 22, 3, 24, 25 };
    int sum = 0;

    print(sum);
}
```

Part 3: Methods & Unity Components (6pts)

You will be presented with two scripts each worth 3pts, one will ask you to create methods, provide default parameters and overwrite them. The second one will ask you to get the transform from different game objects in the scene.

```
// Start is called before the first frame update
```

```
Ⓜ Unity Message | 0 references
```

```
void Start()
```

```
{
```

```
    //Area(10, 3);           //Result should be 30
```

```
    //Area();               //Result should be 1
```

```
    //Area(2.5f, 3.7f);     //Result should be 9.25f
```

```
}
```

```
//Create a function called Area where you pass in two integer values and  
//return the Area value (1pt)
```

```
//Add default values to the Area such that width = 1 and length = 1 (1pt)
```

```
//Overload the function by creating another Area function but this one takes in  
//float values and returns a float (1pt)
```

```
//Attach this Script to Part_3_Cube
```

```
Ⓜ Unity Message | 0 references
```

```
void Start()
```

```
{
```

```
    //Using PrintOutNameAndPosition print out the name and position of the Part_3_Cube (1pt)
```

```
    //using GameObject.Find get the transform of Part_3_Sphere and use PrintOutNameAndPosition (1pt)
```

```
    //Using transform.Find or transform.Get get the Transform of Part_3_Cylinder which is a child of Part_3_Sphere  
    //and use PrintOutNameAndPosition (1pt)
```

```
}
```