

STUDENT ACTIVITY 1.3_2: RECURSION WORKSHEET

MTA Course: Software Development Fundamentals

Topic: Identify the appropriate method for handling repetition

File name: SoftDevFund_SA_1.3_2

Lesson Objective:

1.3: Identify the appropriate method for handling repetition.

Resources, software, and additional files needed for this lesson:

- SoftDevFund_PPT_1.3
- SoftDevFund_RL_1.3
- SoftDevFund_SA_1.3_1
- SoftDevFund_SA_1.3_1_key
- SoftDevFund_SA_1.3_2
- SoftDevFund_SA_1.3_2_key

Directions to the student:

Find the output to the following code segments. Use a trace table to help you obtain the final result.

Content:

```
1. public int identity(int num)
   {
       if(num < 1)
           return 10;
       else
           return num + identity(num - 2);
   }

   int result = identity(10);
   Console.WriteLine("The final answer is " + result);
```

```
2. public int negative(int num)
{
    if(num >= 20)
        return -5;
    else
        return negative(num + 4) + 2 * num;
}

int result2 = negative(-3);
Console.WriteLine("The final answer is " + result2);

3. public int product(int num)
{
    if(num > 20)
        return -1;
    else
        return num * product(-2 * num);
}

int result3 = product(1);
Console.WriteLine("The final answer is " + result3);
```