Section 1:

A. Highlight and fix any errors you can find in the code.

class Program

{

static void Main(string[] args)

{

// Print multiples of 4 between 0 and 50 inclusive

for (var num = 1; num < 50; num++)

{

if (num % 5 = 0)

{

Console.WriteLine($"{num} is a multiple of 4.");

}

}

// Print odd numbers 0 and 50 inclusive

for (var num = 0; num < 50; num++)

{

if (num / 2 == 0)

{

Console.WriteLine($"{num} is an odd number.");

}

}

}

}

**Fixed code:**

class Program

{

static void Main(string[] args)

{

// Print multiples of 4 between 0 and 50 inclusive

for (var num = 0; num <= 50; num++)

{

if (num % 4 == 0)

{

Console.WriteLine($"{num} is a multiple of 4.");

}

}

// Print odd numbers 0 and 50 inclusive

for (var num = 0; num <=50; num++)

{

if (num % 2 != 0)

{

Console.WriteLine($"{num} is an odd number.");

}

}

}

}

**B. Optimized code**

**Replaced more expensive modulo operation with less expensive bitwise AND.**

**C.**

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter the upper limit number:");

var i=Convert.ToInt32(Console.ReadLine());

// Print multiples of 4 between 0 and 50 inclusive

for (var num = 0; num <= i; num++)

{

if (num % 4 == 0)

{

Console.WriteLine($"{num} is a multiple of 4.");

}

}

// Print odd numbers 0 and 50 inclusive

for (var num = 0; num <=i; num++)

{

if (num % 2 != 0)

{

Console.WriteLine($"{num} is an odd number.");

}

}

}

}