

שיעורי בית מודלים חישוביים משימת פתיחה – אופיר הופמן יא

```
public static bool IsDigit(char ch)
{
    return ch == '0' || ch == '1' || ch == '2' || ch == '3' || ch == '4' || ch ==
'5' || ch == '6' || ch == '7' || ch == '8' || ch == '9';
}

public static bool IsNumber()
{
    bool is_number = true;

    ConsoleKeyInfo key = Console.ReadKey();
    int cnt = 0;
    bool start_with_zero = false, last_is_zero = false;
    bool plusMinus = false, last_plus_minus = false;
    bool decimalPoint = false, last_is_decimal_point = false;
    while(key.Key != ConsoleKey.Enter)
    {
        char ch = Convert.ToChar(key.Key);

        if (ch == '0')
        {
            if (cnt == 0)
                start_with_zero = true;

            // Check 2 zeros at the beggining
            else if (cnt == 1 && start_with_zero)
                is_number = false;

            // Check 2 zeros after +/-
            else if (cnt == 2 && plusMinus && last_is_zero)
                is_number = false;

            last_is_zero = true;
            last_plus_minus = false; // reset last char = +/-
        }

        // '+' / '-'
        else if (key.Key == ConsoleKey.OemPlus || key.Key == ConsoleKey.OemMinus)
        {
            // Check for +/- not in the beggining (1st)
            if (cnt > 0)
                is_number = false;

            else if (cnt == 0)
            {
                plusMinus = true;
                last_plus_minus = true;
            }
        }

        // '.'
        else if (key.Key == ConsoleKey.OemPeriod)
        {
            // Check if period not in right spot
            if (cnt == 0 || decimalPoint || last_plus_minus)
                is_number = false;

            else
```

```

        {
            decimalPoint = true;
            last_is_decimal_point = true;
        }
    }

    else
    {
        // Check if input is digit
        if (!IsDigit(ch))
            is_number = false;

        // Check for beggining zero with digit after (e.g. "05.2")
        if (cnt == 1 && last_is_zero)
            is_number = false;

        last_plus_minus = false;
        last_is_decimal_point = false;
        last_is_zero = false;
    }

    key = Console.ReadKey();
    cnt++;
}

// Check if last input was a period
if (last_is_decimal_point)
    is_number = false;

return is_number;
}

```