

# Homework

## Week 1

Bogazici Airbenders UAV Team

**Problem 1.** As a candy shop owner, each day you have  $N$  candies, and standard boxes that take 9 candies each and non-standard boxes that take  $M$  candies each. Each day you use either standard or non-standard boxes. You want to automate the computation by writing a program that takes  $N$  and  $M$  as inputs and prints out how many standard or non-standard boxes it would take to fill the boxes with candies and how many candies would be left out.

Essentially, take  $N$  and  $M$  as inputs then print the quotient and remainder when  $N$  is divided by  $M$  and 9 separately.

**Problem 2.** You are a tiler trying to calculate the cost of a triangle tile. The tile costs 0.80\$ per unit of area. Write a program that prints out the cost of a tile, taking three sides of the triangle as input.

You may want to use Heron's formula.

Essentially, take three sides of a triangle as input, print the area of the triangle multiplied by some constant.

You can take the square root of a number as follows,

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```
#include <iostream>
#include <cmath>

int main()
{
    std::cout << sqrt(2);

    return 0;
}
```

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prints out 1.41421.