# Day 4: Normal Distribution #1

# HackerRank

## Objective

In this challenge, we practice solving problems with normally distributed variables.

## Task

X is a normally distributed variable with a mean of  $\mu=30$  and a standard deviation of  $\sigma=4.$  Find:

- P(x < 40)
- P(x > 21)
- P(30 < x < 35)

## **Output Format**

Your output must be a floating point/decimal number, correct to a scale of  ${f 3}$  decimal places. You can submit solutions in either of the  ${f 2}$  following ways:

- 1. Solve the problem manually and submit your result as *Plain Text*. In the text box below, enter 3 lines of floating point/decimal numbers.
- 2. Submit an *R* or *Python* program, which uses the above parameters (hard-coded), and computes the answer.

Your answer should resemble something like:

0.123 0.456 0.789

(This is **NOT** the answer, just a demonstration of the answering format.)