

## *Date to Day Converter*

Write a program that takes a date as input and prints the day of the week that date falls on.

Your program should take three inputs: m (month), d (day), and y (year). For m, use 1 for January, 2 for February, and so forth. For output, print 0 for Sunday, 1 for Monday, 2 for Tuesday and so forth. Use the following formulas, for the Gregorian calendar:

$$y_0 = y - (14 - m) / 12$$

$$x = y_0 + y_0 / 4 - y_0 / 100 + y_0 / 400$$

$$m_0 = m + 12 * ((14 - m) / 12) - 2$$

$$d_0 = (d + x + (31 * m_0) / 12) \% 7$$

Make sure to test a date before you being. Also explain how does this formula work?