Homework 5

Due April 15, 2020 (by 11:59pm)

Question 1:

Use the following code to read the data (You need install the ISwR package first)

```
stroke <- read.csv2(system.file("rawdata","stroke.csv", package="ISwR"),na.strings=".")
```

In this data set, there are two date variables died (date of dead) and dstr (date of stroke). Based on this dataset, answer the following questions:

1. Convert these two variables to `Date` class.

2. Compute the mean and median stroke date (assign it to `a1`).

3. Compute the mean and median dead date (assign it to `a2`).

4. Compute the mean difference between dead date and stroke date (assign it to `a3`).

Question 2:

Let $p = 0.55$ be the probability that a newly hatched chick is a female. Assuming indepdence, let X equal the number of femal chicks out of 10 newly hatched chicks selected at random. Compute the probability $P(X = 6)$ (assign it to `b1`) and $P(X \geq 6)$ (assign it to `b2`).

Question 3:

Suppose we have a normal random variable X with mean 80.2, standard deviation 2.12. Find a value a such that $P(X \leq a) = 0.4$ (assign it to `c1`).