

## QUESTION 1

25 minutes

20 points

1) Let  $X_1, \dots, X_9$  be the digits of your student number. Please write down:

$X_1$	$X_2$	$X_3$	$X_4$	$X_5$	$X_6$	$X_7$	$X_8$	$X_9$

Let  $X$  be the distribution of the digits in your student number.

- Find and plot the probability mass function of  $X$ .
- Find and plot the cumulative distribution function of  $X$ .
- Find  $E[X]$ ,  $\text{Var}[X]$ .