**7** **(a)** A six-character password is to be made from the following eight characters.

| | | | | | |
|---|---|---|---|---|---|
| Digits | 1 | 3 | 5 | 8 | 9 |
| Symbols | * | $ | # | | |

No character may be used more than once in a password.

Find the number of different passwords that can be chosen if

**(i)** there are no restrictions, [1]

**(ii)** the password starts with a digit and finishes with a digit, [2]

**(iii)** the password starts with three symbols. [2]

**(b)** The number of combinations of 5 objects selected from $n$ objects is six times the number of combinations of 4 objects selected from $n-1$ objects. Find the value of $n$. [3]

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