**Activity – password combinations**

How many combinations of a password of length 4 are there if:

1. only numbers are used?
2. both lower case and upper case letters are used?
3. lower case letters, upper case letters and numbers are used?
4. a) lower case letters, upper case letters, numbers and a selection of 15 special characters (eg £, ^, !) are used?

b) the same character set as 4(a) is used but with a password of length 8?

5. both lower and upper case letters are used with a password of length 16?