4 Variables x and y are such that when e^y is plotted against x^3, a straight-line graph is obtained.

This line passes through the points (1, 13.5) and (7.5, 0.5).

(a) Find y in terms of x. [4]

(b) Find the values of x for which your equation is valid. [2]

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5 A 6-character password is to be formed from the following characters.

Letters	b	f	g	k	m
Numbers	3	5	7	9	
Symbols	*	!	@		

Each character can be used at most once in any 6-character password.

(a) Find the number of 6-character passwords that can be formed if there are no further restrictions. [1]

(b) Find the number of 6-character passwords that can be formed if the password starts and ends with a symbol. [2]

(c) Find the number of 6-character passwords that can be formed if the password:
- starts with either a symbol and then a number, or a number and then a symbol and
- ends with 2 letters. [2]