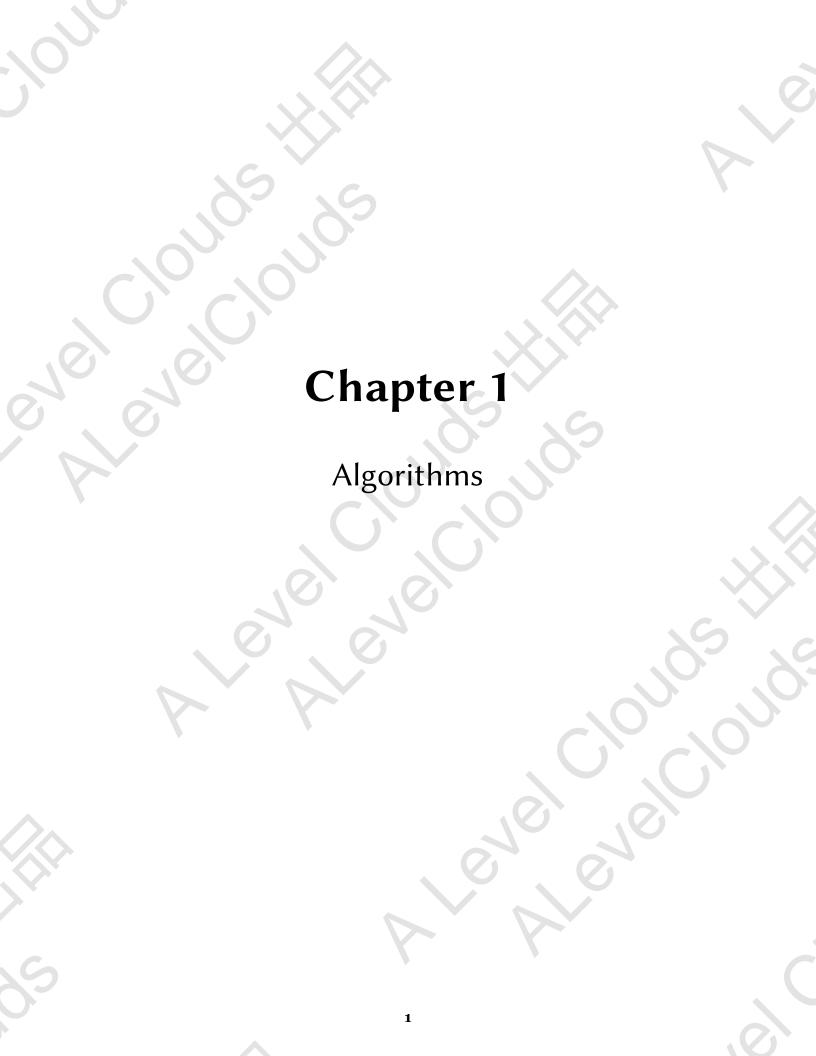
## 爱德思 Decision Mathematics 1 分类真题 2014-2022 册

A Level Clouds 出品

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1. 11 17 10 14 8 13 6 4 15 7

(a) Use the bubble sort algorithm to perform **ONE** complete pass towards sorting these numbers into **ascending** order.

The **original** list is now to be sorted into **descending** order.

(b) Use a quick sort to obtain the sorted list, giving the state of the list after each complete pass. You must make your pivots clear.

**(4)** 

**(2)** 

The numbers are to be packed into bins of size 26

(c) Calculate a lower bound for the minimum number of bins required. You must show your working.

**(2)** 

(Total 8 marks)





1.

McCANN SMITH QUAGLIA CONGDON EVES PATEL BUSH FOX OSBORNE

(a) Use a quick sort to produce a list of these names in alphabetical order. You must make your pivots clear.

**(4)** 

(b) Use the binary search algorithm on your list to locate the name PATEL. State the number of iterations you use.

**(3)** 

The binary search algorithm is to be used to search for a name in an alphabetical list of 641 names.

(c) Find the maximum number of iterations needed, justifying your answer.

**(2)** 

(Total 9 marks)



