離散數學第二次小考 (範圍:ch3 & ch4) 授課老師：鍾國亮教授

日期:2010/10/21 (一)

1.(10 points)

Let , and is a power set of S.

Determine

2. (10 points)

How many different ways of one-to-one function which is from the set { mapping to the set ?

3. (10 points)

Let . Please determine whether each of the following relations satisfies reflexive, symmetric, antisymmetric, and transitive, respectively.

(a)

(b)

(c)

(d)

(e)

4. (10 points)

In how many ways can one travel in the xy – plane from (2,1) to (6,5) using the moves R:(x,y)→(x+1,y) and U:(x,y)→(x,y+1),if the path taken may touch but never rise above the line y = x-1?

5. (10 points)

(1)What is the Rook polynomial for the following chess board?

(2)Suppose we have two castles. What is the number of arrangements? (Hint: Using the derived Rook polynomial in (1) )

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離散數學第二次小考答案 (範圍:ch3 & ch4)

日期:99/10/25

1.



2.



3.



4.



5.

