ព្រះរាជាណាចក្រកម្ពុជា

ជាតិ សាសនា ព្រះមហាក្សត្រ

Institute of technology of Cambodia

Department of Information and communication Engineering

TP02: Set Theory

Cours: Theory of Computer Science

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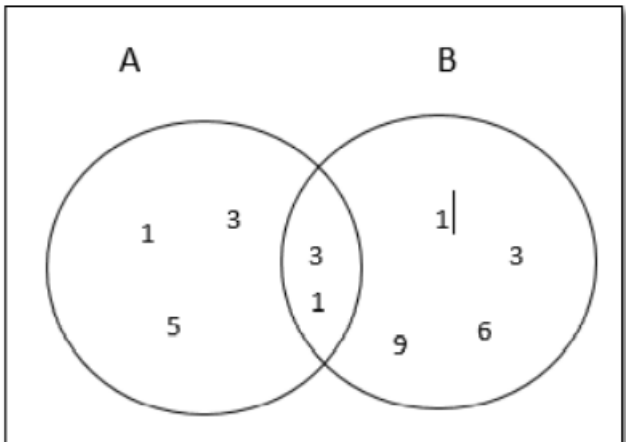
1) if we have a set N={6,4,8,10} and P={10,4,6,8,8} . Is N=P?
   ⇨ is N=P.
2) Differences between real and rational number:
   . Real number is a value of a continuous quantity that can represent a distance along a line, Real number include both rational and irrational number (12.3,-12,π,..)
   . Rational number is a type of real numbers, which is in the form of p/q where q is not equal to zero (1.5, 2.6, -3.8, 18,…….)
3) If we have a set L={d,b,p,p} and Q={p,d,d,c,p} Is L subset Q?
   ⇨ No, L is not subset Q.
4) What is cardinality of A={X ∈ $N + |x < 168$}?
   ⇨ Cardinality of A is |A|=167.
5) What is cardinality of B={e,{e,e},{e,a,e},c,{c,e,c,e}}? Power?
   ⇨ The cardinality of B=5
   ⇨ P(A)=2^B=2^5=32, So that power is 32.
6) If we have a set A={1,3,5} and B={9,6,3,1} what is A union B? A intersection B? A difference B?



   A union B= A U B={1,3,5,6,9}
   A intersection B= A ∩ B={1,3)
   A difference B= {5}
7) Find (A ∩ B) ∪ (B ∩ C)?

A	B	C	A ∩ B	B ∩ C	(A ∪ B) ∪ (A ∩ B)
0	0	0	0	0	0
0	0	1	0	0	0
0	1	0	0	0	0
0	1	1	0	1	1
1	0	0	0	0	0
1	0	1	0	0	0
1	1	0	1	0	1
1	1	1	1	1	1