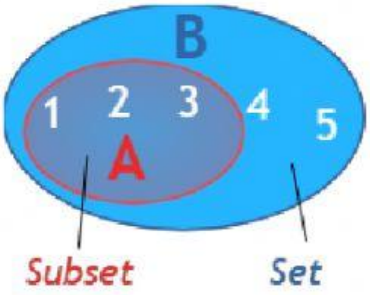


Name: Class: Date:

Mathematics

Sets: Subsets and Venn Diagrams

Answer each of the questions given below.

1) Write out *all* the possible subsets that can be made from the following sets:

(a) J = {h}

Possible subsets:

(b) Q = {11, 12}

Possible subsets:

2) How many elements and possible subsets are there in each of the sets below?

(Write out the elements in order where necessary!)

(a) B = {}

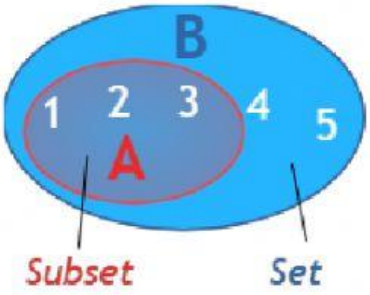
n (B) = No. of possible subsets in B = ^ = subsets.

(b) R = {7}

n (R) = No. of possible subsets in R = ^ = subsets.

(c) A = {vowels in the English alphabet} = { }

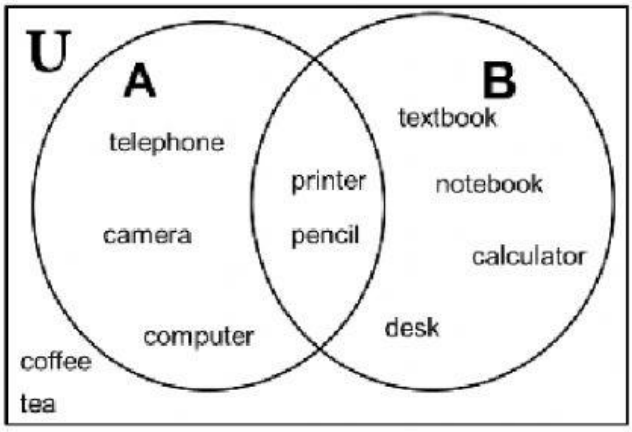
n (A) = No. of possible subsets in A = ^ = subsets.



(d) S = {Factors of 24} = { }

n (S) = No. of possible subsets in S = ^ = subsets.

3.) Use the Venn diagram below to answer the problems that proceed after it.



List all the elements (in alphabetical order) that are found in:

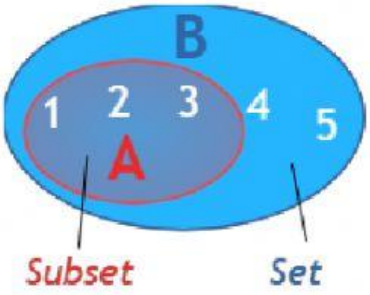
(a) $A \cup B$ = { }

(b) $A \cap B$ = { }

(c) A' = { }

(d) B only = { }

(e) $(A \cup B)'$ = { }



(f) $(A \cap B)' = \{$ $\}$

How many elements are found in each given below?

(g) n (U) = elements.

(h) n ($A \cup B$) = elements.

(i) n $(A \cup B)'$ = elements.

State the number of possible subsets in

(j) $A \cap B$: ^ = = subsets.

(k) B only: ^ = = subsets.

(l) $(A \cap B)'$: ^ = = subsets.

(e.g, if M = {70, 80, 90} then, the no. of possible subsets in M is: 2^3 = 2x2x2 = 8 subsets.)