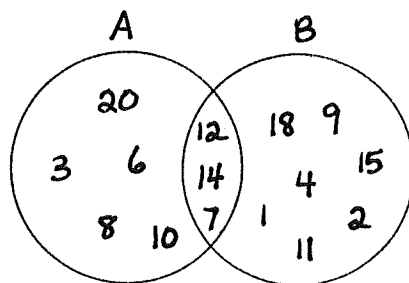


Objective: Define the union and intersection of two sets with diagrams and meanings.

The diagram shown below is called a _____ diagram and illustrates two sets, set A and set B.

Items in a set are called _____. The sets A and B shown below have some elements in common and some elements that are only in one set. Notice that the elements that the two sets have in common are inside both circles.



To list elements in a set, use set symbols and separate elements in the set with commas. Always alphabetize and order your elements.

$$A = \{ \quad \quad \quad \}$$

$$B = \{ \quad \quad \quad \}$$

The combining or “putting together” of sets is called a _____ of sets.

The symbol for union is _____ and it is associated with the word “_____” (meaning that to be in a union of sets, an element must be in one OR another of the sets).

Where sets overlap or what sets have in common is called an _____ of sets.

The symbol for intersection is _____ and it is associated with the word “_____” (meaning that to be in an intersection of sets, an element must be in one set AND all other sets).

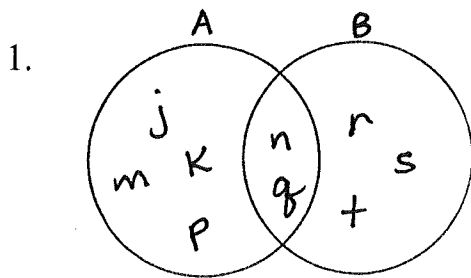
$$\underline{\hspace{2cm}} \quad A \cup B = \{ \quad \quad \quad \}$$

$$\underline{\hspace{2cm}} \quad A \cap B = \{ \quad \quad \quad \}$$

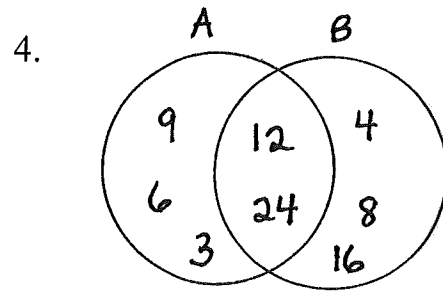
If two sets have nothing in common, they are called _____ sets.

An empty set can be noted by empty set symbols { } or the symbol _____.

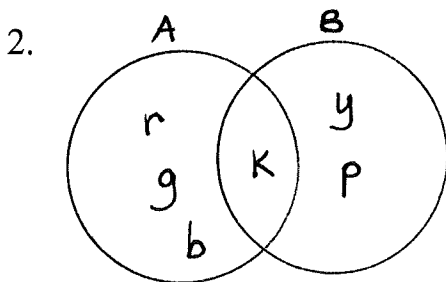
Classroom Practice



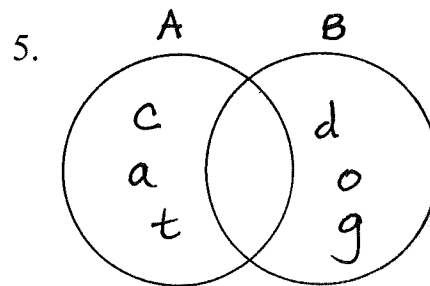
- A = {
 B = {
 $A \cup B = \{$
 $A \cap B = \{$



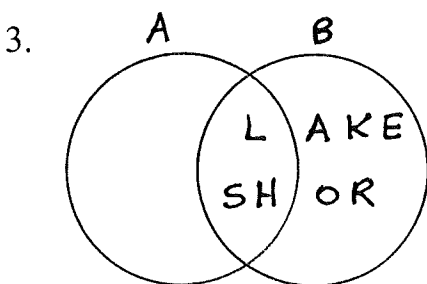
- A = {
 B = {
 $A \cup B = \{$
 $A \cap B = \{$



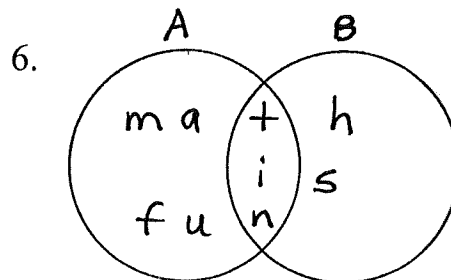
- $A \cup B = \{$
 $A \cap B = \{$



- $A \cup B = \{$
 $A \cap B = \{$



- $A \cup B = \{$
 $A \cap B = \{$



- $A \cup B = \{$
 $A \cap B = \{$