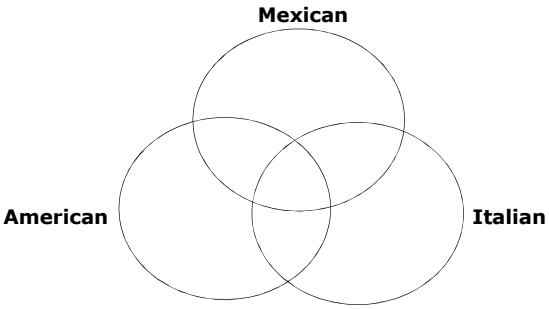
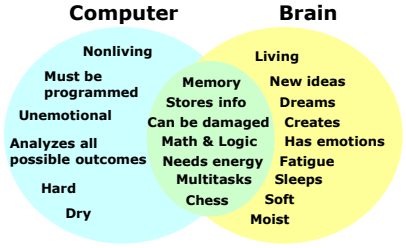
Venn Diagrams



A computer and a human brain share some characteristics, but they obviously differ in many ways. If you consider their characteristics and abilities as sets, the ones that they share would be contained in their intersection.



A Venn diagram shows relationships among sets. In a Venn diagram, circles are used to represent sets. When two circles overlap, the region shared by circles represents the intersection of the two sets.

The intersection of the set of all triangles and the set of all regular polygons is the set of equilateral triangles.

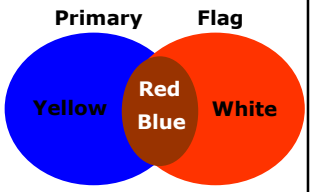
Additional Example 1A: Drawing Venn Diagrams

Draw a Venn diagram to show the relationship between the sets.

A. primary colors: {red, blue, yellow}
colors in the American flag: {red, white, and blue}

To draw the Venn diagram, first determine what is in the intersection of the sets.

The intersection is {red, blue}.

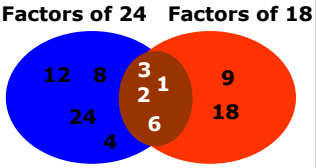


Additional Example 1B: Drawing Venn Diagrams

Draw a Venn diagram to show the relationship between the sets.

B. Factors of 24 {1, 2, 3, 4, 6, 8, 12, 24}
Factors of 18 {1, 2, 3, 6, 9, 18}

The intersection of the sets is {1, 2, 3, 6}.



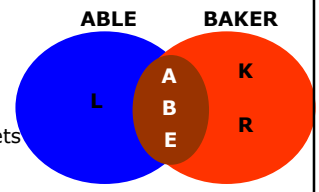
Try This: Example 1A

Draw a Venn diagram to show the relationship between the sets.

A. letters in the word ABLE: {A, B, L, E}
letters in the word BAKER: {B, A, K, E, R}

To draw the Venn diagram, first determine what is in the intersection of the sets.

The intersection of the sets is {A, B, E}.



Try This: Example 1B

Draw a Venn diagram to show the relationship between the sets.

B. letters in the word APPLE {A, P, P, L, E}
letters in the word BANANA {B, A, N, A, N, A}

The intersection of the sets is {A}.