Name _____

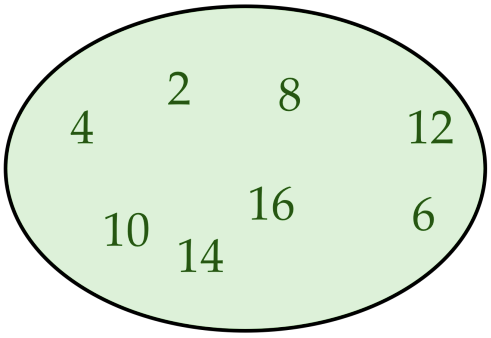
Venn Diagrams

Date _____ Period _____

A Venn Diagram is a visual illustration showing a relationship between two or more sets.

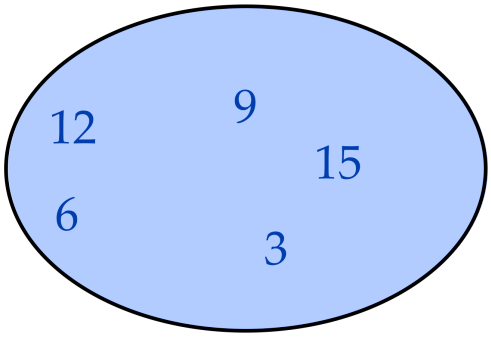
Set A is a set of multiples of 2 that are less than 17.

set A = {2, 4, 6, 8, 10, 12, 14, 16}



Set B is a set of multiples of 3 that are less than 17.

set B = {3, 6, 9, 12, 15}

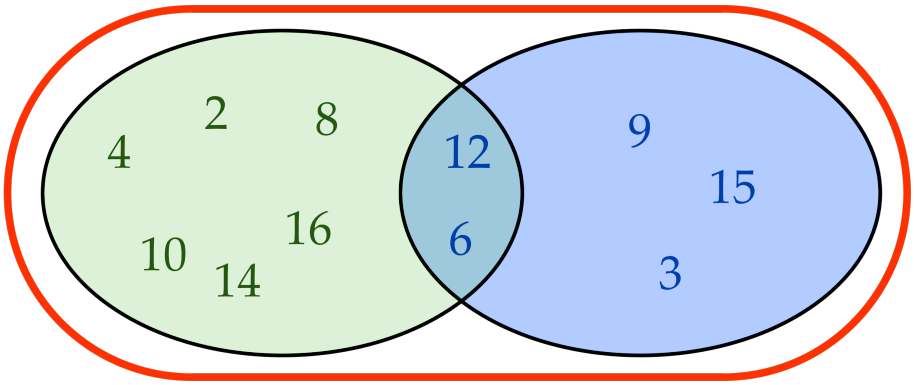


This Venn Diagram illustrated the relationship between Set A and Set B.

The Union of two sets is the set containing the elements that are in either set or both sets.

set C = set A ∪ set B

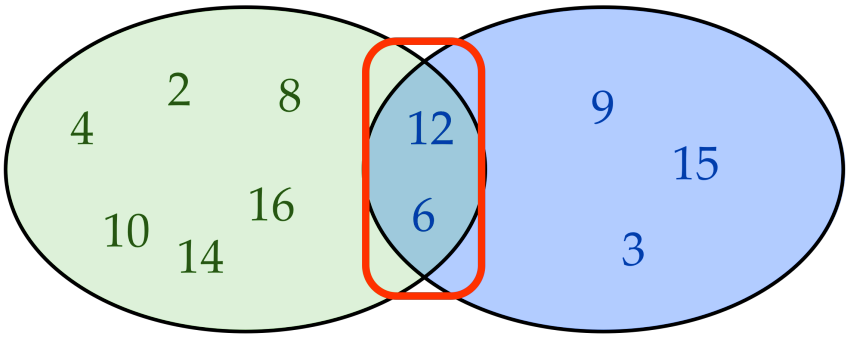
set C = {2, 3, 4, 6, 8, 9, 10, 12, 14, 15, 16}



The Intersection of two sets is the set containing the common elements of the two sets.

set D = set A ∩ set B

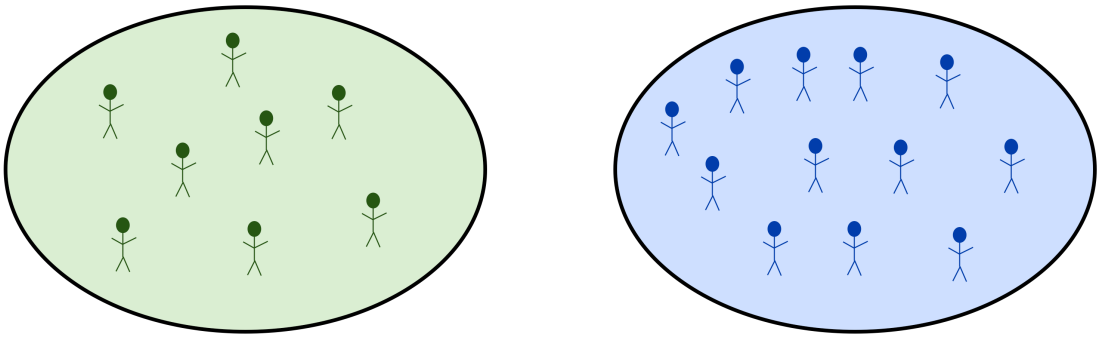
set D = {6, 12}



There are 15 students in athletics.

8 students enjoy playing basketball. 12 students enjoy playing racquetball

How many students enjoy playing both basketball and racquetball?



8 + 12 = 20

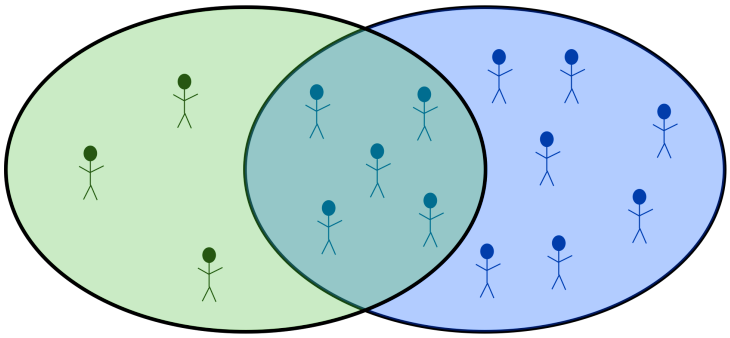
there must be an overlap (intersection) of 5 students

There are 15 students in athletics.

8 students enjoy playing basketball. 12 students enjoy playing racquetball

How many students enjoy playing both basketball and racquetball?

3 students enjoy playing only basketball.



7 students enjoy playing only racquetball

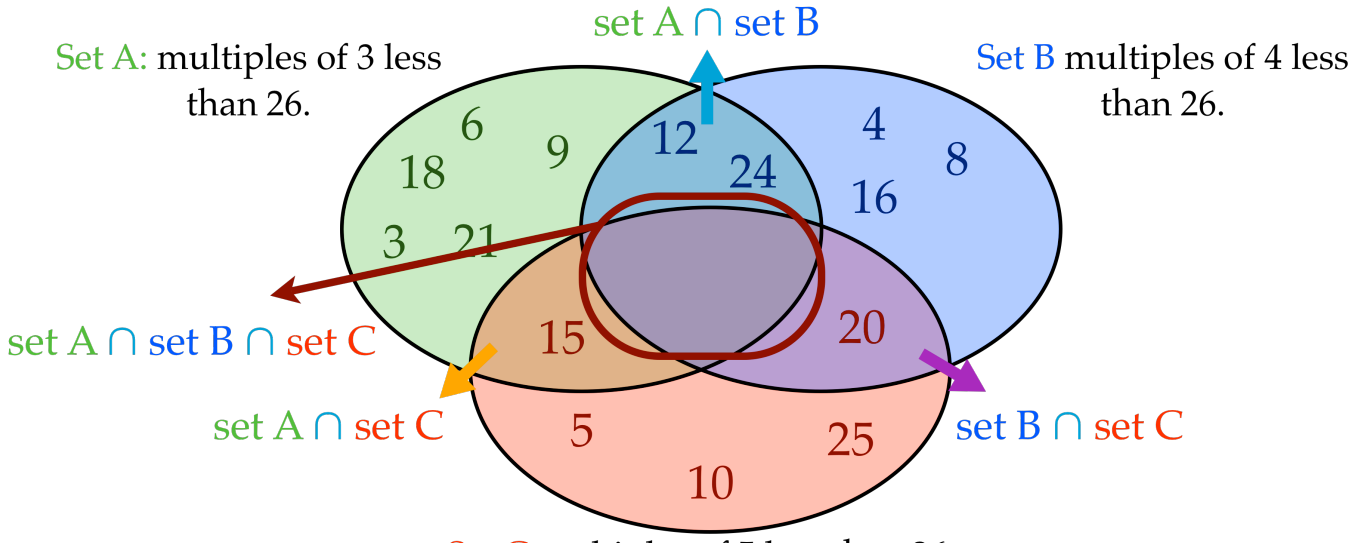
5 students enjoy playing both basketball and racquetball

there must be an overlap (intersection) of 5 students

Venn Diagrams can also illustrate the relationship between three sets.

Set A: multiples of 3 less than 26.

Set B multiples of 4 less than 26.



Set C multiples of 5 less than 26.