Section 2 – Venn Diagrams

- A **Venn diagram** illustrates the relationships between sets. They are usually circles, and usually have a rectangle around them.
- For example, if I want to think of the universal set of dogs, and then break them into groups based on size, I would have the following Venn diagram

![Venn Diagram of Dog Breeds]

- Notice the circles in the example above do not intersect. Meaning a dog cannot be *both* over 10 lbs and under 10 lbs at the same time.
- Say you are comparing houses you want to buy. You are looking for a 3 bedroom, 2 bath home, with a two car garage.

There are 3 possible sets
- House with 3 bedrooms
- House with 2 bathrooms
- House with a 2 car garage

Do these sets intersect at all?
Yes, we could have a house that has everything we are looking for, or only some.

So the diagram would look like the following

![Venn Diagram of House Features]

Let’s discuss the characteristics of the houses in each area ($A – F$)…
Which houses would you want to see first?