Exercise – Planes

1. Implement code for a 2-dimensional Plane

You should implement it as either a class with member methods, or as a struct with corresponding methods.

Include methods for:

* Classifying which side of a Plane a Point is on
* Finding the distance of a Point to a Plane
* Think about how this might relate to classifying which side of a Plane a Point is on
* Finding the closest point on a Plane to a Point
* Think about how this relates to the distance a Point is to a Plane and the Plane’s normal
* Classifying which side of a Plane a Circle is on
* Finding the distance of a Circle to a Plane
* Finding the point of intersection of a Ray and a Plane

You may want to add methods to previous geometric code for working with a Plane, such as a Circle testing against a Plane.

1. Implement code for a 3-dimensional plane.

Implement it in a similar manner to a 2-dimensional Plane, including the same methods but for 3-dimensional geometry.

## Challenge

Implement code for classifying which side of a Plane an Axis-Aligned Bounding Box is on, in 2-dimensions and 3-dimensions.