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Homework 3

5a) In Unity, collisions between objects are detected using physics components like colliders and rigidbodies. Unity tracks the interactions of these components within the physics engine. When two objects with colliders come into contact, Unity generates events such as OnCollisionEnter, OnCollisionStay, or OnCollisionExit in the associated scripts, enabling the detection and handling of collisions.

5b) True. When the same C# script is added as a component to multiple game objects, each game object detects its own collisions independently. This is because each instance of the script operates in the context of its specific game object, and Unity makes sure that the collision detection and related events are handled per game object.

5c) The GetComponent method in Unity allows a script to access a component attached to the same game object. For example, you can use GetComponent<Rigidbody>() to retrieve the Rigidbody component of a game object, which can then be manipulated or referenced for physics-based operations. This can be used for adjusting properties or calling functions.