Apple Picker Questions

1. What is the way that Gibson shows you to save data for later use by your Unity application?
    - Duplicate the scene and put different name (scene)
2. Where is the saved data actually stored? (check the documentation)
    - Asset/Scenes
3. How do you create prefab instances using a script? What parameters are needed?
    - Create a new GameObject, attached the script, then drag the GameObject from the Hierarchy window to Project window.
4. What is the difference between an orthographic and a perspective camera?
    - Perspective → like human eye has field of view (depth)
    - Orthogonal → everything is the same size regardless of distance (which when seen from one side it's like on a 2D platform.
5. With a .1 chance to change directions, how would you describe the movement of the AppleTree?
    - Does this make sense given the location of the movement change test?
    - Supposedly has a 10% chance to change direction per frame. But with a fast processor computer, each frame can go very quickly and the Tree would change direction quite often.
6. What is the utility of Time.deltaTime when calculating movement rates? Can you state generally what the purpose of Time.deltaTime does?
    - Over the time of movement, the speed becomes highest as time gets "bigger".
    - Time*deltaTimes → create speed
7. What is the range of values returned from Random.value?
    - 0 to 1
8. What is the purpose of the Invoke() function?
    - A function that called a certain function name in certain number of seconds.
9. What property tells a script where a GameObject exists in the world?
    - *not sure* Inspector
10. Describe the process you need to use if you have two classifications of objects that need to be under control of the physics engine, but that shouldn't interact with one another if they collide.
    - Using Layer Collision Matrix which can be found on by going *Edit → Project Setting → Physics* then within the matrix (table), uncheck the items that you do not want to collide with each other.
11. What represents the ground in this game? How is this different than the ground in roll-a-ball?
    - Basically nothing, as if we don't create the parameter to destroy the apple after certain negative elevation, that apple will exist forever.

12. What is the difference between the lines Destroy(this) and Destroy(this.gameObject) in a script?
    - Destroy(this) will remove the object and the script. While Destroy(this.gameObject) you will only destroy the gameObject itself.
13. What happens to the playability of the game if you move the position of the camera or change the size of the camera? What problems can you identify?
    - GameObjects could be out of the scene.
14. In English or psuedoCode, describe the process by which you match the motion of an object on screen to the location of the mouse.
    - Using the input of the mouse position then transfer the position of the basket to the input position (of the mouse).
15. What is the difference between how Baskets remove apples when compared to how the rolling ball removed PickUps?
    - In roll-a-ball, the pickup does not move while the player is moving to catch the pickups. In apple picker, both player and “pickups” are moving.
    - Does it matter to the player? A little bit, as player can not predict where the apple would fall next.
16. What objects get added to the hierarchy when you add a GUI?
    - EventSystem and Canvas
17. What type of data is returned from a call to GameObject.FindObjectsWithTag(<string>)?
    - Array
18. What data type is used to store the collection of Baskets?
    - *i think* numBasket (integer)
19. What needs to be added to the start of a script to enable the data type used to store Baskets?
    - basketList = new List<GameObject>();

Exercises in Unity:

1. Can you write a script that instantiates 10 cube prefabs, all in a row along the positive Z axis, starting at the origin? Create a new scene, attach the script to the MainCamera and run to see your results
    - I do not know how to do this.
2. Modify your previous script to make an 8 by 8 grid, on the x-z plane, starting at the origin.
    - I do not know how to do this.
3. Can you modify the basket script so that it will follow the mouse in both the x and y directions?

    - Yes, but not quite successful. The basket was able to move in both x and y-axis, yet, only the bottom basket is showing and the score also increased by 300 rather than 100 for each apple.
4. Can you do it and maintain the stack of baskets?
    - Unfortunately, no. I was not able to figure out how to do so.
5. What needs to change to make ApplePicker behave more like Kaboom, where the player completes waves, the game pauses, and the next wave speeds up?
    - I'm not sure what is the right way to do this, but I believe it can be achieved through a level system in which each level is different Scene and each scene we adjust the AppleTree script inspector.
6. Try to implement the waves mechanic