



# Quiz Unit 5

## QUESTION

## CHOICES

**1** Which of the following follows Unity naming conventions (especially as they relate to capitalization)?

1. `public void MultiplyScore(int currentScore) { }`
2. `public void multiplyScore(int CurrentScore) { }`
3. `public Void MultiplyScore(Int currentScore) { }`
4. `public Void MultiplyScore(int CurrentScore) { }`

**2** If there is a boolean in script A that you want to access in script B, which of the following are true:

1. You need a reference to script A in script B
2. The boolean needs to be public
3. The boolean must be true
4. The boolean must be included in the Update method

**3** Which code to fill in the blank will result in the object being destroyed?

```
string name = "player"
bool isDead;
float health = 3;

if (_____) {
    Destroy(gameObject);
}
```

- a. Line 1
- b. Line 2
- c. Line 3
- d. Line 4

- a. 1 only
- b. 1 and 2 only
- c. 2 and 3 only
- d. 3 and 4 only
- e. 1, 2, and 3 only
- f. All are true

- a. `name = "player" && isDead && health < 5`
- b. `name != "player" && isDead != true && health > 5`
- c. `name == "player" && !isDead && health < 5`
- d. `name == "player" && isDead != true && health > 5`

- 4** You run your game and get the following error message in the console, “NullReferenceException: Object reference not set to an instance of an object”. Given the image and code below, what would resolve the problem?
- a. In the hierarchy, rename “Game Manager” to “gameManager”  
 b. In the hierarchy, rename “Game Manager” as “GameManager”  
 c. On Line 1, rename “GameManager” as “Game Manager”  
 d. On Line 3, remove the GetComponent code



```
1. private GameManager gameManager;
2. void Start() {
3.     gameManager = GameObject.Find("GameManager").GetComponent<GameManager>();
4. }
```

- 5** Read the Unity documentation below about the OnMouseDown event and the code beneath it. What will the value of the “counter” variable be if the user clicked and held down the mouse over an object with a collider for 10 seconds?
- a. 0  
 b. 1  
 c. 99  
 d. 100  
 e. A value over 100

## MonoBehaviour.OnMouseDown()

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### Description

OnMouseDown is called when the user has clicked on a [GUIElement](#) or [Collider](#) and is still holding down the mouse.

OnMouseDown is called every frame while the mouse is down.

```
int counter = 0;
void OnMouseDown() {
    if (counter < 100) {
        counter++;
    }
}
```

- 6** Based on the code below, what will be displayed in the console when the button is clicked?

- a. "Welcome, Robert Smith"
- b. "Welcome, firstName Smith"
- c. "Button is ready"
- d. "Welcome + Robert + Smith"

```
private Button button;
private string firstName = "Robert";

void Start() {
    button = GetComponent<Button>();
    button.onClick.AddListener(DisplayWelcomeMessage);
    Debug.Log("Button is ready");
}

void DisplayWelcomeMessage() {
    Debug.Log("Welcome, " + firstName + " Smith");
}
```

- 7** You have declared a new Button variable as “private Button start;”, but there’s an error under the word “Button” that says “error CS0246: The type or namespace name ‘Button’ could not be found (are you missing a using directive or an assembly reference?)”

- a. You can’t name a button “start” because that’s the name of a Unity Event Function
- b. “Button” should be lowercase “button”
- c. You are missing “using UnityEngine.UI;” from the top of your class
- d. New Button variables must be made public

- 8** Look at the documentation and code below. Which of the following lines would *NOT* produce an error?

- a. Line 5
- b. Line 6
- c. Line 7
- d. Line 8

```
public void AddForceAtPosition(Vector3 force, Vector3 position, ForceMode mode = ForceMode.Force);
```

## Parameters

**force** Force vector in world coordinates.

**position** Position in world coordinates.

## Description

Applies force at position. As a result this will apply a torque and force on the object.

1. `public Vector3 explosion;`
2. `Vector3 startPos;`
3. `float startSpeed;`
4. `void Start {`
5.  `AddForceAtPosition(50, 0, ForceMode.Impulse)`
6.  `AddForceAtPosition(100, startPos, ForceMode.Impulse)`
7.  `AddForceAtPosition(startSpeed, startPos, ForceMode.Impulse)`
8.  `AddForceAtPosition(explosion, new Vector3(0, 0, 0), ForceMode.Impulse)`
9. `}`

- 9 If you wanted a button to display the message, "Hello!" when a button was clicked, what code would you use to fill in the blank?

- a. `(SendMessage);`
- b. `(SendMessage("Hello"));`
- c. `(SendMessage(string Hello));`
- d. `(SendMessage>Hello);`

```
private Button button;
void Start {
    button = GetComponent<Button>();
    button.onClick.AddListener_____;
}
void SendMessage() {
    Debug.Log("Hello!");
}
```

- 10 Which of the following is the correct way to declare a new List of game objects named "enemies"?

- a. Line 1
- b. Line 2
- c. Line 3
- d. Line 4

1. `public List[GameObjects] enemies;`
2. `public List(GameObject) "enemies";`
3. `public List<GameObjects> "enemies";`
4. `public List<GameObject> enemies;`

# Quiz Answer Key

#	ANSWER	EXPLANATION
1	A	<code>public void MultiplyScore(int currentScore)</code> The “public”, “void”, and “int” keywords should be lowercase. Method names (like “MultiplyScore”) should be Title Case. variable names (like “currentScore”) should be camelCase.
2	B	You always need a variable reference to the script you’re trying to access and that variable must be public.
3	C	To compare a string, two ==’s are needed. By default, booleans are false unless declared as true and adding an exclamation mark before !isDead checks that it’s false. Since health = 3, checking “health < 5” is true.
4	B	<code>GameObject.Find("GameManager")</code> is returning a NullReferenceException error because there’s no object in the scene named that. If you renamed the “Game Manager” in the hierarchy to have no spaces, it would be fixed.
5	D	Since the function is called “every frame” the mouse is held, it will be called hundreds of times in 10 seconds. However, the condition will only be true if the counter is less than 99, meaning it will no longer increase after 100.
6	B	If you wanted it to say “Robert Smith”, you would have needed to use the variable name, <i>firstName</i> , <i>without</i> quotation marks.
7	C	In order to use some of the UI classes like “Button,” you need to include the “UnityEngine.UI” library
8	D	The first two required parameters are Vector3 variables. Only option D uses Vector3 variables for those parameters.
9	A	<code>SendMessage</code> does not require any parameters - it prints “Hello” no matter what when it is called. Also, when adding a listener, you just need to include the method’s name - no parentheses are required.
10	D	<code>public List&lt;GameObject&gt; enemies</code> is correct. <code>&lt;GameObject&gt;</code> should be in angle brackets. You don’t need “GameObject” to be plural because it’s the type of object it is. Variable names are never declared with quotation marks around them.