

# UNIT TEST REVIEW: ADVANCED TOOLS AND TECHNIQUES

This unit test will include everything we covered in **UNIT 3: Advanced Tools and Techniques**, including how to use Room actions, Step events, Test Chance actions, Test Instance Count actions, Step Towards and Step Avoiding actions, collision masks, parent and child objects, variables, Question actions, and Time Lines.



## **PART I: Knowledge and Understanding (20 Marks)**

- ☞ Multiple Choice
- ☞ True or False

## **PART II: Thinking (20 Marks)**

- ☞ Review some of the **Actions** that we covered in this unit (e.g. **Check Grid, Test Variable, Check Empty**, etc.).
- ☞ Review how to check if there is an object above, below, to the left or to the right of an object using the **Check Empty** action.
- ☞ Review how to check the variable using the **Test Variable** action.
- ☞ Review how using the **Start Block** and **End Block** actions affect how instructions are executed in an event.

## **PART III: Communication (20 Marks)**

- ☞ Review the difference(s) between a **Begin Step**, a **Step** and an **End Step** event.
- ☞ Review some of the built-in GameMaker variables and what they do (e.g. **yprevious, vspeed, room\_speed**, etc.).
- ☞ Review the difference(s) between the **Step Towards** and the **Step Avoiding** actions.
- ☞ Review **collision masks** and why they are important for detecting collisions in a game.
- ☞ Review the difference(s) between using **Precise** collision checking versus **Bounding Box** collision checking.
- ☞ Review the difference(s) between the **Create Instance** action and the **Change Instance** action.
- ☞ Review the difference(s) between a **parent object** and a **child object**.
- ☞ Review the rules that must be followed when naming variables in GameMaker.

## **PART IV: Application (20 Marks)**

- ✓ Review how to create a platform game using some of the **Question** actions we covered in this unit (e.g. **Check Empty**, **Check Collision**, etc.).
- ✓ Review how to use variables in a program, how to set variables and how to test the value of variables.
- ✓ Review how to set collision masks to accurately and realistically detect collisions between objects.