

# Maths Quiz

A simple Scratch quiz creation program designed for KS2 pupils

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# Programming Elements

- Simple **variable** to hold the score
- **Increasing the variable** if the user gets an answer right
- **Printing the variable** when reporting the score to the user
- **Selection** of pathway (if or else) depending on the answer to the question
- Simple typed **input** by the user of the quiz

# Maths Quiz Elements

Create a program which asks the user basic maths questions. If the user types the right answer they will be congratulated and their score will be increased by 1. If the user types the wrong answer they will be told the correct answer. At the end of the question the score will be reported to the user.

# Choose a single sprite to ask the questions

You can keep the cat.

If you are keeping the cat move to the next slide.

If you want another character right mouse click on sprite1 and left click on delete.

Choose a new sprite from file.



I recommend a sprite that has a mouth to ask questions, people or animals would be ideal.

Starting the quiz, creating a variable to hold the score in and setting the score to zero to start with

Start the quiz by inserting a green flag start block in sprite scripts



Make a variable by selecting variables in blocks and clicking on make a variable. Name it score.



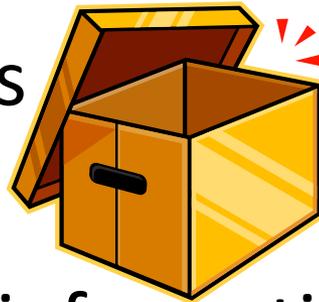
Set variable score to zero by inserting this block underneath the start block



# Understanding Variables

Variables are very important in programming.

They are like boxes



You can store any information (text or numbers) in a variable

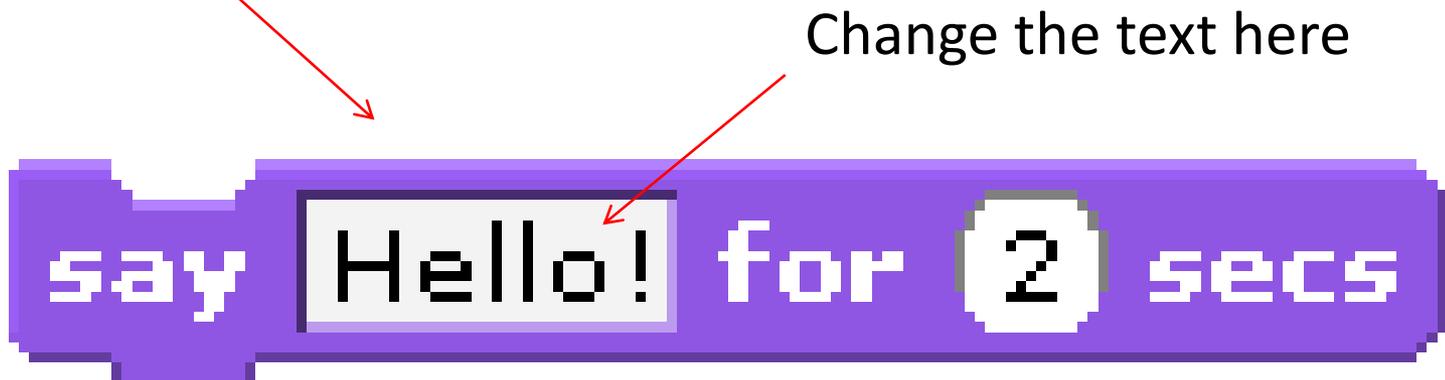
We are storing the user score inside a variable called score. When the user gets a question right we increase the variable score by one.

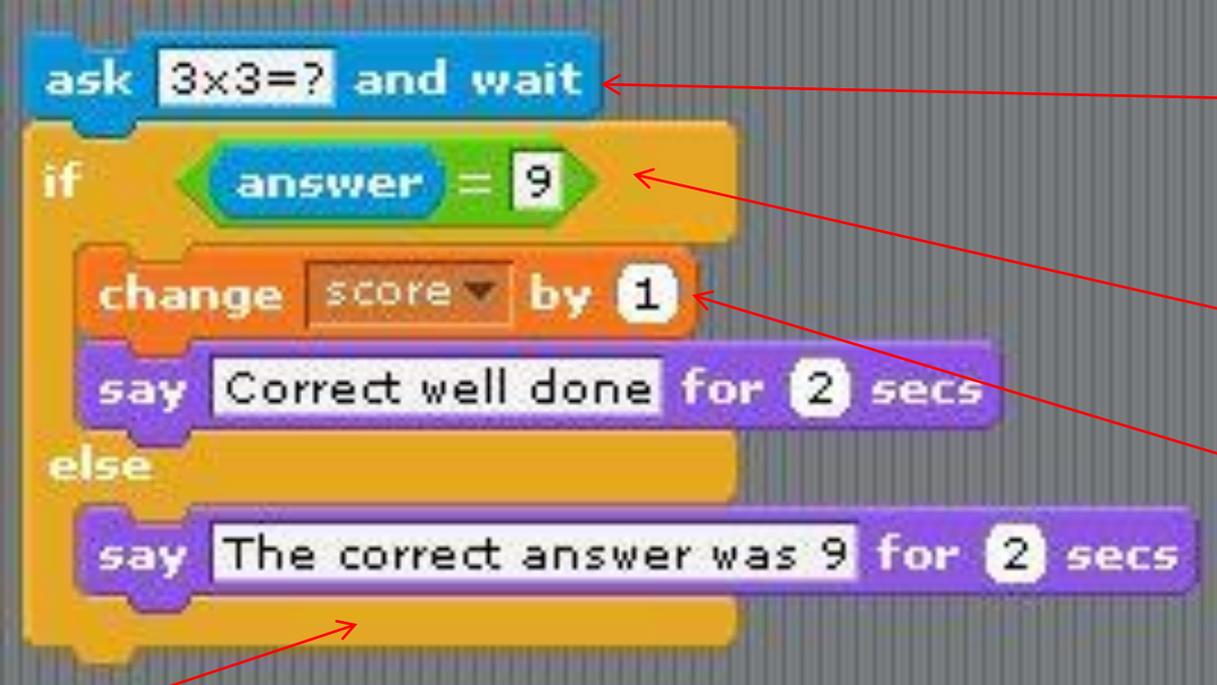


# Introducing the quiz to the user using say commands

From the looks blocks use one or two say commands to welcome users to the quiz

In this program we are using just one block of code. All instructions attach underneath the last instruction created





Ask a question and wait for the user to answer

If user answer is = to 9 then increase score variable by 1 and say correct well done

Else say the correct answer was....

Create this then adapt/change the text to show your question and your right answer

# Ask a question and check to see if it is correct

The **if else** block allow the program to go down two possible paths depending on the users answer



Say your score is

The second say block goes and looks inside the variable called score and puts what ever number is inside the variable on the screen

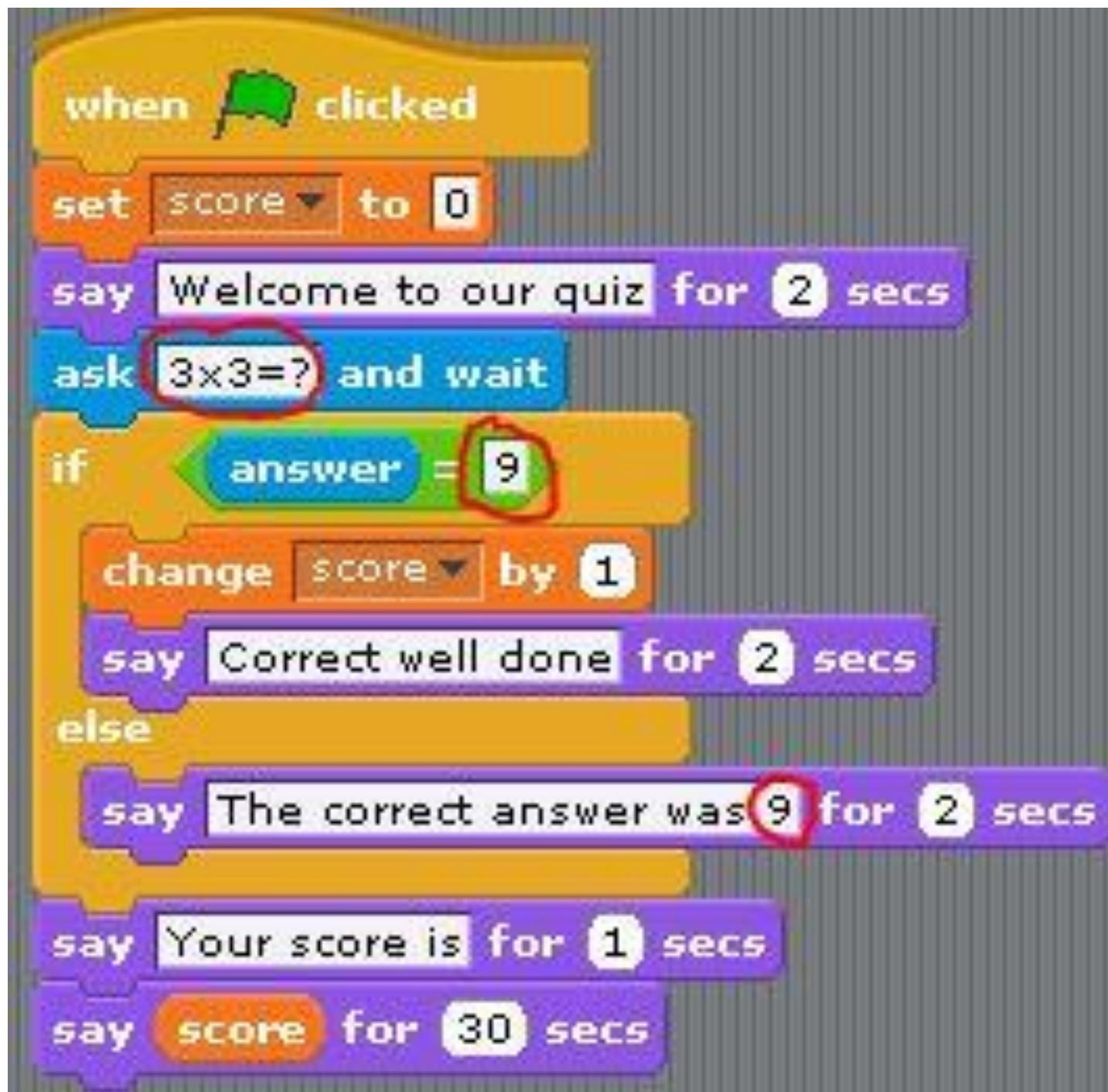


Let the user know what their score is

See next slide to find out how to copy block

Repeat this block of code to make the next question

You will need to change the parts circled in red

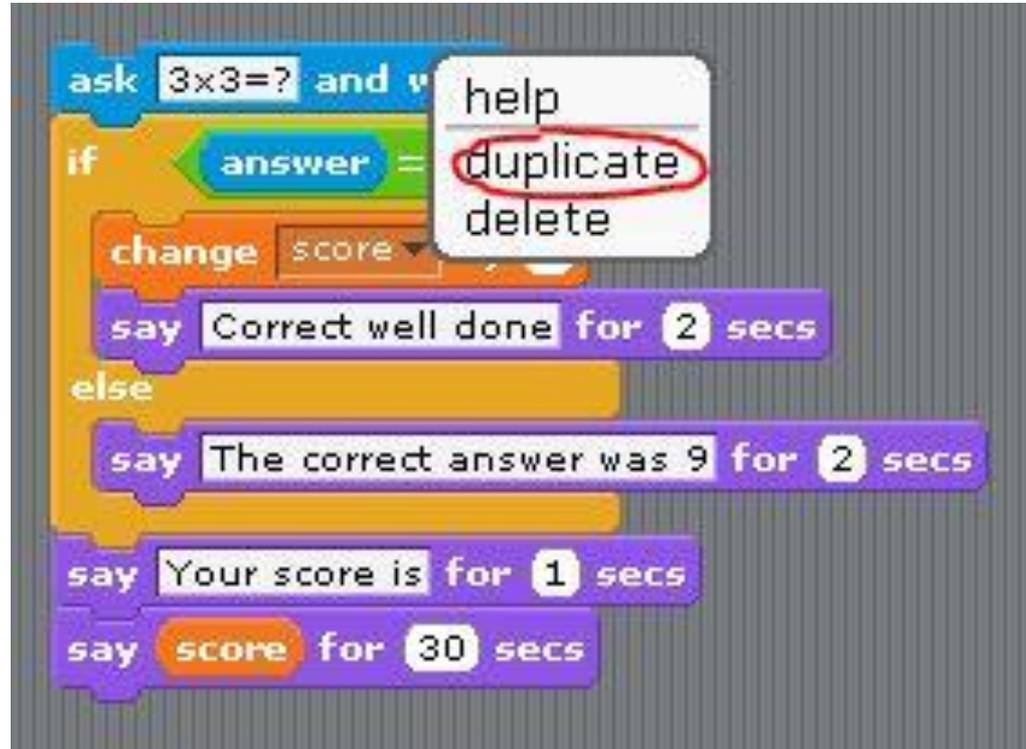


```
when green flag clicked
  set score to 0
  say Welcome to our quiz for 2 secs
  ask 3x3=? and wait
  if answer = 9
    change score by 1
    say Correct well done for 2 secs
  else
    say The correct answer was 9 for 2 secs
  say Your score is for 1 secs
  say score for 30 secs
```

The image shows a Scratch script for a quiz. The script starts with a 'when green flag clicked' block, followed by 'set score to 0', 'say Welcome to our quiz for 2 secs', and 'ask 3x3=? and wait'. An 'if' block checks if the 'answer' is '9'. If true, it 'change score by 1' and 'say Correct well done for 2 secs'. If false, it 'say The correct answer was 9 for 2 secs'. The script ends with 'say Your score is for 1 secs' and 'say score for 30 secs'. Red circles highlight the '3x3=?' in the 'ask' block, the '9' in the 'if' block, and the '9' in the 'else' block's 'say' block.

# Copying a block of code to use for each question

Drag this block away from the top commands. Right click on the block. Left click on duplicate. Do this as many times as the number of questions you want. Adapt the code (see last slide) and connect the blocks up to make one long code block.





Say your final score is

The second say block goes and looks inside the variable called score and puts what ever number is inside the variable on the screen



Let the user know what their final score is

# Finishing touches

- You may want to add a more interesting background by importing a background on stage.
- You may want to add a sound when a question is correct and another when it is wrong.
- You will want to test your program by getting other people to play test it.