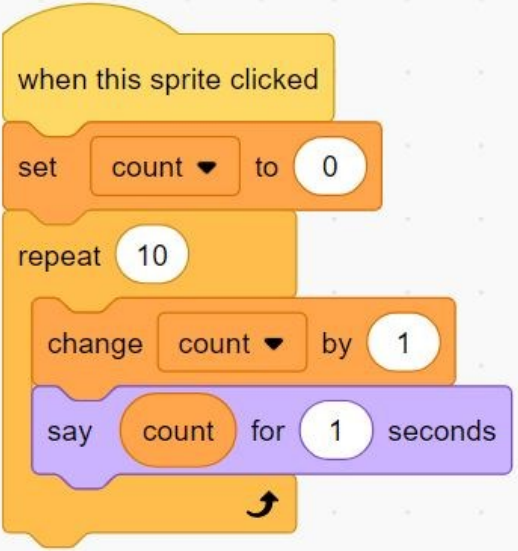


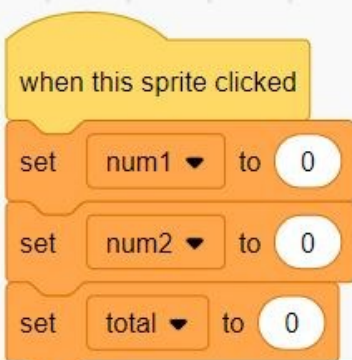

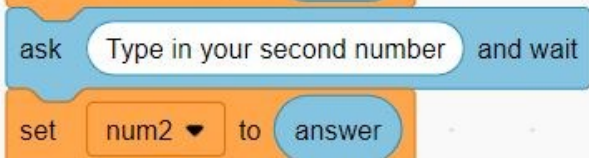
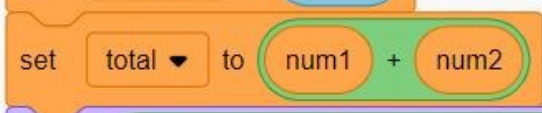
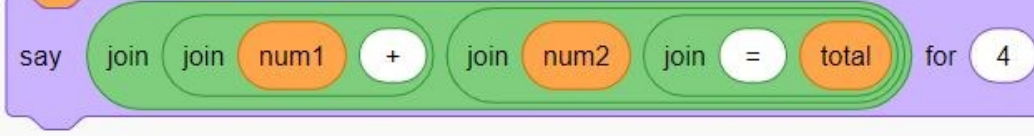
# VIRGINIA VARIABLES

## PREDICT

Read the code and the code labels carefully with your partner

Write in the box what you think the code does

Assigns 0 to count variable (Initialisation)		I predict this code will  When it is run
Adds 1 to count variable		
Says what is in the count variable		

Assigns 0 to all three variables (Initialisation)		I predict this code will  When it is run
Asks the users to type in a number and then assigns that number to num1		
Asks the users to type in a number and then assigns that number to num2		
Adds num1 and num2 and puts the answer into total		
Tells the user what is inside all three variable		

Now mark your work using the predict marksheet

## VIRGINIA VARIABLES

### INVESTIGATE



Work with a partner  
of same ability

Work with a partner. Open Scratch and load  
Virginia Variables

Run the program as many times as you want. Work with a partner to answer these questions.

Look inside the Placeholder sprite

1, Which two lines of code collect the users name and assign it to the variable **user\_name**?

A

B

2, How many times is the **user\_name** variable block used in the program?

Look inside Accumulator sprite

3, Which block of code adds one to the score variable?

4, How many times is **switch costume to andie-c** run?

5, Which block of code tells everyone what the score is?

Look inside Adding sprite

6, Name all three variables

A,

B,

C,

7, Which line of code blocks adds num1 to num2?

Look inside Counting

8, What line of code says what is inside the count variable?

9, Which block initialises the count variable?

*HINT Sets it back to what it was at the start*

10, How many times is say count by 1 run?

Now mark your work using the investigate marksheet



## VIRGINIA VARIABLES

### CHANGE

Work with a partner. Open Scratch and load  
Virginia variables



Make changes to the code to answer these questions

Make changes to Accumulator

1, Change the code to give 2 points for every time a basket is scored.

What did you change?

2, Change the code to start the score at 9 points

What did you change

Make changes to Adding

3, Change the code to multiply both numbers

Circle the block you changed it to?



Make changes to Counting *HINT Duplicate code and then change*

4, Change the code to count slower

What did you change?

5, Change the code to count in 2s.

What did you change?

6, Change the code to count in halves. *HINT decimal halves*

What did you change

7, Change the code to count backwards from 10.

What two things did you change

A,

B,

Now mark your work using the change marksheet

# VIRGINIA VARIABLES

## CREATE



Work within Virginia Variable to complete tasks 1-4. You can change code or duplicate a sprite and then change the code

### Task 1 Placeholder

Add some more say blocks that use the **user\_name** variable to the end of the programme to tell the user something interesting

### Task 2 Adding

Work within **Adding** to make the program add three numbers together HINT



### Task 3 Counting

Plan and make a 30 second count down timer that does something interesting when it gets to 0

### Task 4 Adding

Plan and make a programme to subtract one number from another number

### Task 5 Create your own programme that uses variables

Objects (sprites and back-grounds) Overview	Algorithm Plan
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### Teacher and Pupil Assessment

Circle one column on each row to show what you think you have achieved



	Not used a variable in my program	copied a variables idea exactly	Adapted a variable idea	Used variables in a way not shown in the example programs
<b>Variables</b>	0 Marks	1 mark	2 marks	3 marks
			Not used previous programming concepts for real purpose	Used previous programming concepts for real purpose
<b>Used previous programming concept such as loops correctly</b>			0 Marks	1 mark

## VIRGINIA VARIABLES

### EXAMPLE PLANNING

#### COUNTING PLANNING

##### OVERVIEW

Add 1 to count variable in a loop

Say what is assigned to count every time it goes through a loop

##### ALGORITHM

Set count variable back to 0 (initialisation)

Loop 10 times

    Add 1 to count variable

    Say what is inside count variable

#### ADDING PLANNING

##### OVERVIEW

1. Get user to type in two numbers

2. Assign those numbers to variables

3. Add variables and assign to a new variable

4. Tell user what is inside the all variables

##### ALGORITHM

Set all the variables back to 0 (initialisation)

Ask user to type in a number and assign to num1 variable

Ask user to type in a number and assign to num2 variable

Add num1 and num2 and assign to total variable

Say num1 + num2 = total