

Computing - Test Your Skills

Year 6 We Are Computational Thinkers



1. What is an algorithm? Tick one.

- A set of instructions to complete a task.
- A mathematical calculation.
- A repeating loop in programming code.

1 mark

2. When we are planning a new project or we encounter a new problem, we use decomposition to help us.

What does decomposition mean? Tick one.

- Decomposition is removing the unnecessary detail of the problem to make it easier.
- Decomposition is breaking down the problem into smaller parts.
- Decomposition is finding the correct sequence for the problem.

1 mark

3. Jack has been asked to write an algorithm using pseudocode.

What is pseudocode?

1 mark

4. Look at this code.

What does it do? Tick the correct algorithm.

1 mark

```
when green flag clicked
ask "What's your name?" and wait
repeat 10
say answer for 2 seconds
if answer = Jack then
say "Hello Jack." for 2 seconds
```

- It will say the name ten times and then always say “Hello Jack”.
- It will say the name ten times and then only say “Hello Jack” if it is Jack.
- It will say the name ten times and then never say “Hello Jack”.

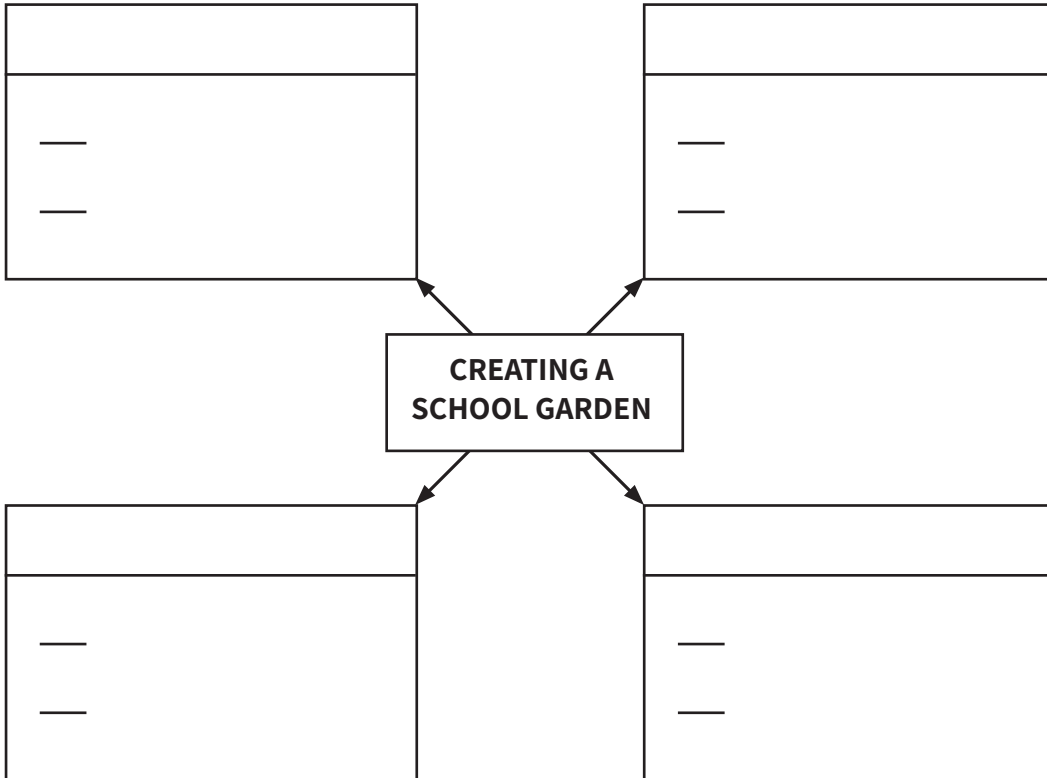
5. Write down **one** positive consequence of being able to share digital content online.

1 mark

6. Dylan, Lucas and Ellie have been asked to work together to create a school garden to grow food.

Use **decomposition** to show how they should plan this project. Write down different things they could do using the diagram below to help you.

2 marks



7. This statement is taken from the Scratch website.

What do I do if I see someone being mean or disrespectful?

Don't add to the flames! Responding to mean comments with more mean comments just makes things worse, and could result in your account being blocked. Instead, simply report anything that is disrespectful or unconstructive, and we'll follow up with the author. We check reports every day, multiple times per day – so rest assured, we'll sort things out.

1 mark

Describe an example of a 'disrespectful' action. Make sure you do not use words that are disrespectful in your description.

8. Look at the algorithm below. It stores numbers in variables A and B and then transfers them.

Complete the table to trace the steps of the algorithm. Then answer the questions below.

2 marks

Instruction	Value of A	Value of B	Value of C
Let the variable A become 5			
Let the variable B become 7			
Print A			
Print B			
Let the variable A become A + B			
Let the variable B become A - B			
Let the variable A become A - B			
Print A			
Print B			

A) What are the values of A and B at the end of the algorithm?

A = _____

B = _____

B) What does this algorithm do?

/10

Total