

Kit's Clever Computing Quiz: Mastering Algorithms

Learning objective: To understand, design, and debug algorithms, and explain that algorithms are sets of instructions for solving problems.

Help Kit the fox solve these computing puzzles! Read each question carefully and select the best answer or write your response clearly.

Answer Key: 1. A, 2. B, 3. True, 4. Algorithm, 5. C, 6. False, 7. Debugging, 8. B, 9. Sequence, 10. A. An algorithm is a precise set of steps to complete a task. Debugging is the process of finding and fixing errors in code.

Word bank: algorithm · debug · sequence · input · output · selection · repetition

1. **1. What is an algorithm? A) A step-by-step set of instructions* B) A type of computer hardware C) A computer game D) A secret code (1 mark)**
2. **2. When we follow instructions in order, what is this called? A) A loop B) A sequence* C) A variable D) A bug (1 mark)**
3. **3. True or False: An algorithm must be accurate to work correctly. (1 mark)**
4. **4. If you are writing a recipe for a jam sandwich, what is the 'recipe' acting as in computing terms? (1 mark)**
5. **5. What do we call the process of finding and fixing a mistake in an algorithm? A) Sequencing B) Inputting C) Debugging* D) Printing (1 mark)**
6. **6. True or False: Algorithms can only be used by computers. (1 mark)**
7. **7. What word completes this sentence: 'If a computer program crashes, you need to perform _____ to find the error.' (1 mark)**
8. **8. Which of these is the best example of an algorithm? A) A list of favourite colours B) Instructions for building a model aeroplane* C) A picture of a fox D) A storybook (1 mark)**
9. **9. If an algorithm asks you to repeat a task five times, what is this called? A) A sequence B) A condition C) Repetition* D) An error (1 mark)**

10. 10. Why is the order of steps important in an algorithm? A) Because the computer follows them one by one in order* B) Because it looks neater C) Because computers like long lists D) It does not matter (1 mark)

Draw: Draw a flow chart for a simple daily task, like brushing your teeth or making a cup of tea, using boxes for each step.



Extension challenge: Kit wants to build a robot that tidies up! Write an algorithm of five steps to help a robot find a misplaced toy and put it back in the toy box.