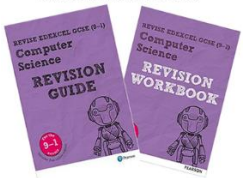
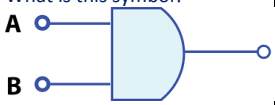
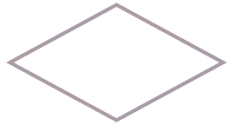
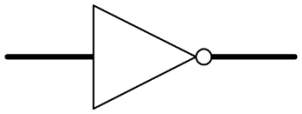
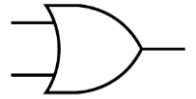
50 Facts Computer Science

Use this sheet to make sure you know the answers to these questions

Useful Revision Books



What is an algorithm? A step by step series of instructions to solve a problem	What does the ALU do? Performs arithmetic and logic calculations	Name a technique that make reading computer code easier. Comments, Tabs, Line breaks	What does the Control Unit (CU) do? Manages instructions	What is an Array? A container object that holds a fixed number of values of a single type.	Apply a Run Length Encoding algorithm to the following data: RRRGGRBBBBBBRRRBBBBB 3R2G1R6B3R5B	What is pseudo-code? A method of writing code using plain English (often used for planning a program)
An image is 200 pixels wide and 100 pixels high and uses 4 colours. Construct an expression to show its size in bytes. (200x100x2)/8	What is volatile memory? Used to store program data while it is being executed. Will be lost when there is no power.	What is this symbol?  And Gate	What is a Syntax error? An error in the format of the program statements such as missing semicolons or keywords spelt incorrectly	What are buses? The wires that carry data from one part of the computer to another.	What is Assembly Language? Machine code tells the microprocessor step by step what to do. For example "Move data from register A to Register B.	What is a global variable? One that can be used in different sub programs. (throughout the program)
What are the four different data types? Integer, Float, Boolean and String	What type of validation checks how long the data is? Length Check	What does Add R0, R1, #5 mean? Add 5 to what is stored at R1 and store the answer at R0	What does this operator mean? != Not equal to.	What is a type error? When an operation is attempted that is invalid for that data type.	What is the name of the character set that uses 7 bits? ASCII	What is iteration? The repetition of a block of statements within a computer program.
What are the functions of an operating system? File Management, Input/Outpup management, Resource allocation, Process Management, Network Management, User Management	Apply a Caesar Cipher algorithm to the word Marsh with a shift of +3 PDUVK				What does ADD R0,R0,R3 mean? Add what is stored at Register 3 to what is stored at Register 0 and store the answer at Register 0	What does this symbol mean in a flow chart?  Decision
What is this symbol?  Not Gate	What is an overflow error? When you add two eight bit binary numbers and the resulting answer uses a 9th bit therefore creating a binary overflow.				Explain what this CSS codes does: { font-style:italic; font-weight:bold; } Writing is in italic and is bold	What is cache? High speed temporary memory (part of the CPU)
What is a Compiler? Systems software that converts programs written in high level language into machine code	What is Type Check validation? Checks if value is of the expected data type.	What is the name of the character set that uses 16 bits Unicode	Convert the 8 bit binary value of 00100001 to denary 33	What type of validation checks if data has been entered? Presence check	What two things can be stored using binary values? Data and Instructions	State how many bits are needed to represent the 26 letters of the alphabet 5
What are network protocols? Rules about how data is transferred over a network	What does FTP stand for? File Transfer Protocol	What are the names of the email protocols? SMTP, POP3, IMAP	What does DNS stand for? Domain Name System	What is a network packet? The data that has been broken up to be sent over a network.	What are the three network media? Copper, Twisted Pair (Ethernet), Fibre Optic	What are the different Network Toplogies? Bus, Ring, Star, Mesh
What does this symbol do in programming? % Modulus (remainder after the division)	What is the heights on a sound wave called? Amplitude	Convert the binary value 00111110 into hex 3E	What type of physical storage uses lasers? Optical	What does a register do? Stores data	What is a name error? When a name is used that is not known about (often a misspelt variable)	What is this symbol?  Or Gate