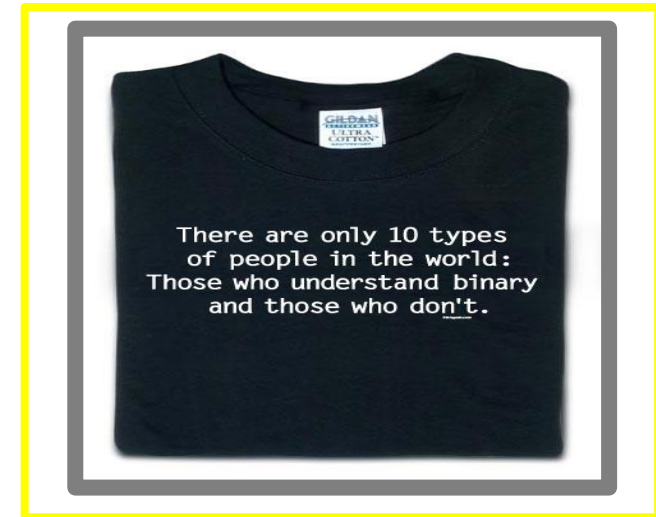


Data Representation



Algorithm	Another way of saying rules and instructions in Computer Science. An Algorithm is a step-by-step procedure or set of instructions to achieve an outcome.
Resolution	The fineness of detail that can be seen in an image. The higher the resolution of an image, the more detail it holds. In computing terms, resolution is measured in dots per inch (dpi).
Binary Numbers	A number system that contains two symbols, 0 and 1. This is also known as base 2. All computer data is represented using binary, a number system that uses 0s and 1s.
Denary Numbers	The regular number system you are used to counting in. This uses the numbers 0-9 and place value of multiples of 10.
Pixel	One of the individual units (often called dots) that make up an image.
Bitmap images	Are organised as a grid of coloured squares called pixels (short for 'picture elements').
Data compression	To reduce the file size of text, image and audio data in order to transfer it more quickly and so that it takes up less storage space.



Decimal	Binary	Hexadecimal
0	0000	0
1	0001	1
2	0010	2
3	0011	3
4	0100	4
5	0101	5
6	0110	6
7	0111	7
8	1000	8
9	1001	9
10	1010	A
11	1011	B
12	1100	C
13	1101	D
14	1110	E
15	1111	F

KEMNAL KEY QUESTIONS

1. What is a Binary Number?
2. What would the binary number 10000000 be in denary?
3. Why do computers use binary instead of denary numbers?
4. Convert these numbers from binary to denary: 110 and 1111
5. Convert these numbers from denary to binary: 12 and 28

