Graphics

The difficulty with comparing the graphics on home computers is that most now offer more than one mode of graphics. Typing MODE 1, for example, might give you access to 16 colours on a grid of 40 × 25 positions, while MODE 7 might give the maximum resolution of 320 × 200 pixels, but with a choice of just two colours. One thing to watch out for is that the maximum resolutions on some machines can only be realised if you use a monitor instead of a television as the screen

> > > BBC Model B, Atari 400 & 800, Commodore 64, Sord M5, TI99/4A
> > Spectrum, Dragon-32, Oric-1, Tandy Color
> Vic-20

The Quality Of Basic

Almost all home computers come with a BASIC interpreter built into ROM, but as you will have gathered from our 'Basic Flavours' boxes, the commands available on each machine vary considerably. All BASICs that bear the name Microsoft work in approximately the same way, others may use completely different structures for strings, arrays etc. A good BASIC is one that has lots of friendly 'high level' commands like CIRCLE, DRAW, and PAINT to take advantage of that computer's graphics and sound

> > > BBC Model B, Dragon-32, Spectrum, Atari 400 & 800, Oric-1, Tandy Color, TI99/4A
> > Vic-20, Commodore 64, Sord M5

Sound

Computers that make use of the television speaker can generally produce higher quality sound than those using a built-in speaker, though this is not always true — so ask for a demonstration before you buy. A single-voice system allows only single notes (like playing the piano with one finger), three and four voices permit chords. The 'white noise' generators found on some computers are used for creating explosions and other effects, while those with 'envelope control' can imitate different musical instruments like a mini synthesiser

> > > BBC Model B, Atari 400 & 800, Commodore 64, Oric-1, Sord M5, TI99/4A
> > Vic-20
> Spectrum, Dragon-32

Games Software

Much of the best games software is available, not from the computer manufacturer, but from specialist software suppliers. What governs both the quantity and quality of games produced for any machine is the number of users of that machine (therefore the size of potential sales) and the computer's technical specifications. Consequently, some computers have a 'games' image, whilst others are geared towards home programming or business use

> > > Spectrum, Atari 400 & 800, Vic-20, TI99/4A
> > BBC Model B, Commodore 64, Dragon-32, Sord M5, Tandy Color
> Oric-1

Memory

The more RAM a computer has, the more sophisticated the programs it can run in terms of the amount of data they can handle at once. Home computers come with anything from 1K to 64K as standard, though most can be expanded with plug-in modules. However, the computer may well require part of this memory for its own internal use (called the 'system overheads'), leaving less for the program. High-resolution colour graphic displays, in particular, consume large amounts of RAM

> > > Spectrum (48K), BBC Model B, Atari 800, Commodore 64, Dragon-32, Oric-1 (48K)
> > Atari 400, Tandy Color (16K,) TI99/4A
> Vic-20, Sord M5 (4K)

Cassette Recorder

Unless you are prepared to stick exclusively to ROM cartridge or disk-based software, you need a cassette recorder. Only a couple of manufacturers still require you to purchase their own unit — most computers will work with any domestic cassette recorder, though both the speed and the reliability with which programs are saved and retrieved vary considerably. The better systems also permit control over the cassette recorder's motor

> > > Spectrum, BBC Model B
> > Dragon-32, Oric-1, Sord M5, Tandy Color, TI99/4A
> Atari 400 & 800, Vic-20, Commodore 64