1. There is a wider range of achievement amongst English pupils studying math than amongst their Japanese counterparts.

Passage: *Large sample international comparisons of pupils' attainments since the 1960s have established that not only did Japanese pupils at age 13 have better scores of average attainment, but there was also a larger proportion of 'low' attainers in England, where, incidentally, the variation in attainment scores was much greater.*

2. The percentage of Gross National Product spent on education generally reflects the level of attainment in mathematics.

Passage: *The percentage of Gross National Product spent on education is reasonably similar in the two countries, so how is this higher and more consistent attainment in math achieved?*

3. Private schools in Japan are more modern and spacious than state-run lower secondary schools.

Passage: *Lower secondary schools in Japan cover three school years, from the seventh grade (age 13) to the ninth grade (age 15). Virtually all pupils at*

this stage attend state schools: only 3 per cent are in the private sector. Schools are usually modern in design, set well back from the road and spacious inside.

4. Teachers mark homework in Japanese schools.

Passage: *Pupils mark their own homework: this is an important principle in Japanese schooling as it enables pupils to see where and why they made a mistake, so that these can be avoided in future.*

5. Disease-spreading pests respond more quickly to pesticides than agricultural pests do.

Passage: *According to a recent study by the Food and Agriculture Organisation (FAO), more than 300 species of agricultural pests have developed resistance to a wide range of potent chemicals. Not to be left behind are the disease-spreading pests, about 100 species of which have become immune to a variety of insecticides now in use.*

6. A number of pests are now born with an innate immunity to some pesticides.

Passage: *Because of their tremendous breeding potential and genetic diversity, many pests are known to withstand synthetic chemicals and bear offspring with a built-in resistance to pesticides.*

7. Biological control entails using synthetic chemicals to try and change the genetic makeup of the pests' offspring.

Passage: *In the face of the escalating perils from indiscriminate applications of pesticides, a more effective and ecologically sound strategy of biological control, involving the selective use of natural enemies of the pest population, is fast gaining popularity — though, as yet, it is a new field with limited potential.*

8. Bio-control is free from danger under certain circumstances.

Passage: *The advantage of biological control in contrast to other methods is that it provides a relatively low-cost, perpetual control system with a*

minimum of detrimental side-effects. When handled by experts, bio-control is safe, non-polluting and self-dispersing.

9. Taxonomic research involves comparing members of one group of ants.

Passage: *For taxonomy or classification, long series, from a single nest, which contain all castes (workers, including majors and minors, and, if present, queens and males) are desirable, to allow the determination of variation within species.*

10. New species of ant are frequently identified by taxonomists.

Passage: *Unfortunately, these methods are not always compatible. The taxonomist sometimes overlooks whole species in favor of those groups currently under study, while the ecologist often collects only a limited number of specimens of each species, thus reducing their value for taxonomic investigations.*

11. Range is the key criterion for ecological collections.

Passage: *For taxonomy or classification, long series, from a single nest, which contain all castes (workers, including majors and minors, and, if present, queens and males) are desirable, to allow the determination of variation within species. For ecological studies, the most important factor is collecting identifiable samples of as many of the different species present as possible.*

12. A single collection of ants can generally be used for both taxonomic and ecological purposes.

Passage: *Unfortunately, these methods are not always compatible. The taxonomist sometimes overlooks whole species in favor of those groups currently under study, while the ecologist often collects only a limited number of specimens of each species, thus reducing their value for taxonomic investigations.*