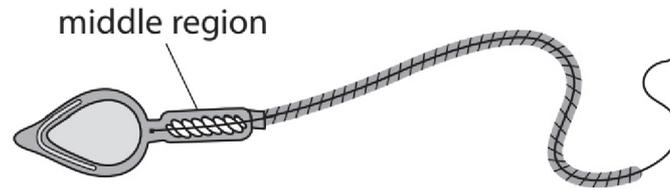


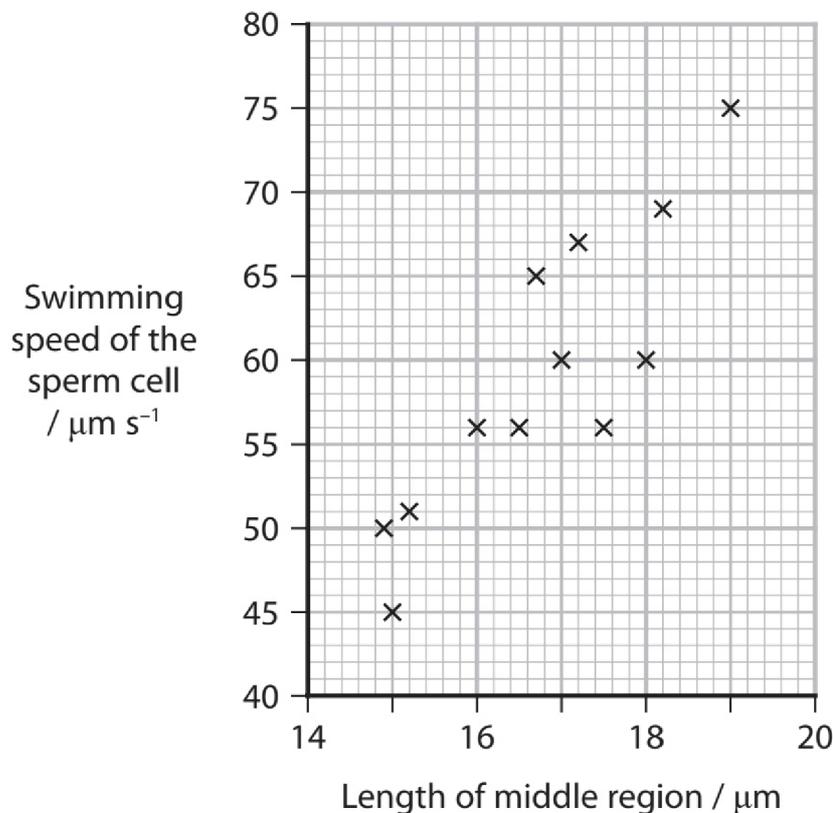
*(b) Organisms have evolved different mating strategies such as:

- Some male animals have sperm cells with longer middle regions, as shown in the diagram.



The females of these species produce multiple egg cells and mate with many males in a short period of time.

The graph shows the effect of the length of the middle region on the swimming speed of the sperm cell.



- Some male animals, such as the zebra longwing butterfly, produce spermatophores that remain inside the reproductive system of the female after mating.

The spermatophore contains sperm cells and nutrients for the female. The spermatophore also releases chemicals that reduce the attractiveness of this female butterfly to other males.

- Some female animals, such as the eastern box turtle, mate with numerous males and then store the sperm for a number of years. This allows fertilised egg cells to be laid even when the female has not mated in that year.