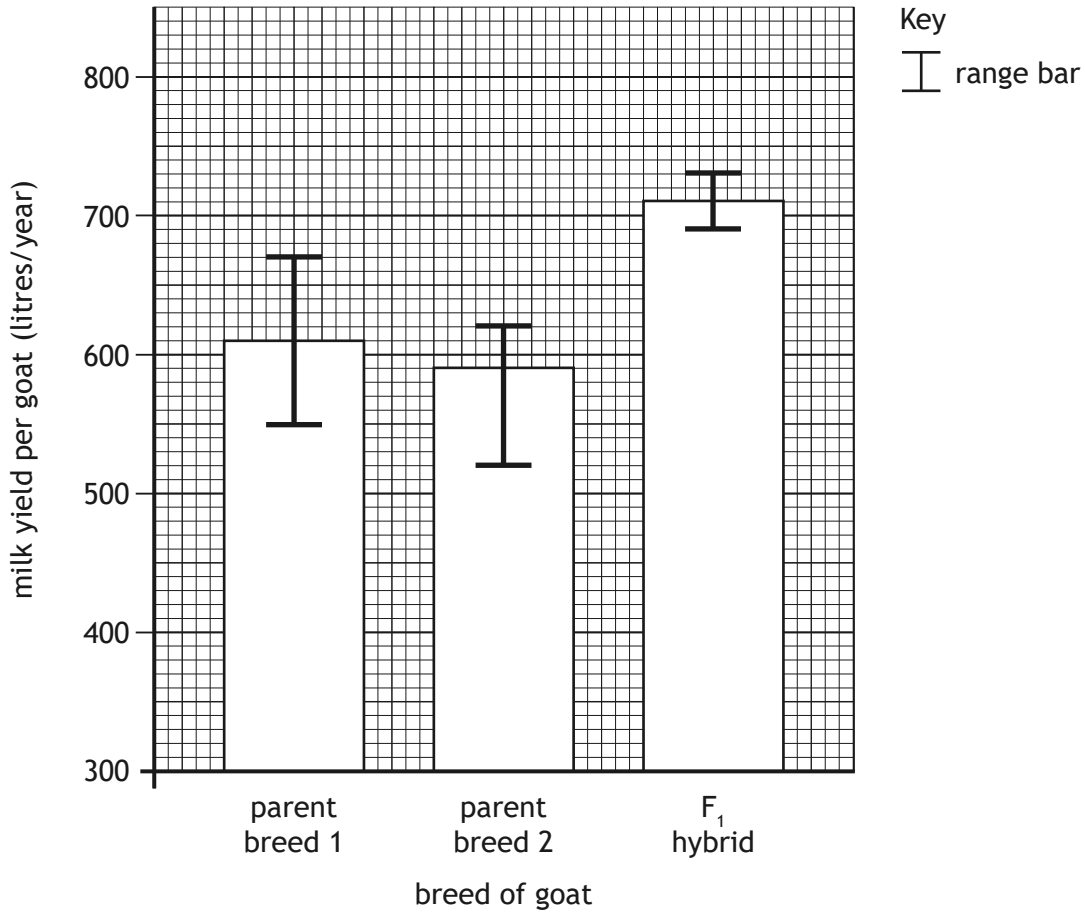
12. Different breeds of goat can be crossbred to produce F_1 hybrids that have increased milk production.

In an investigation, the milk yields from the two parent breeds of goat and the F_1 hybrid were measured.

The results are shown in the graph. The bars show the average milk yield of 10 goats per group. The range bars show the range of milk yields in each group.



(a) (i) Calculate the difference in the lowest and highest milk yield from individual goats in this investigation. **1**

Space for calculation

_____ litres/year

(ii) State how the graph shows that milk yield was measured from more than one goat of each breed. **1**

_____

12. (continued)

(b) An F_2 population was produced by breeding F_1 hybrids together. Some individual goats within this population showed a decrease in milk yield compared with the F_1 hybrid.

Suggest why this decrease occurred. **1**

_____

(c) Some goats are intensively farmed. They are kept in buildings, which can lead to overcrowding and poor ventilation.

(i) State one advantage to the farmer of intensive farming. **1**

_____

(ii) Suggest a reason why parasites can spread rapidly in intensive farms. **1**

_____

_____

(iii) Animals that are intensively farmed often display signs of poor welfare, such as altered levels of activity.

State the term used to describe very high levels of activity. **1**

_____

[Turn over