1. **Indicate whether the following statements are true or false by placing a tick () in the appropriate box in**

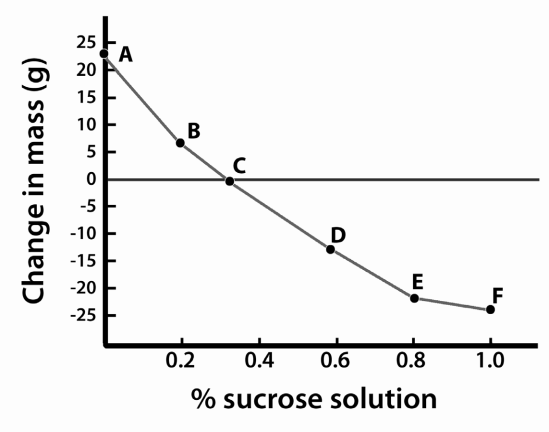
**each case.**

|  |  |
| --- | --- |
| True | False |
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* 1. Meiosis is an important source of variation.
  2. Mitosis occurs in mature red blood cells in humans.
  3. During mitosis the nuclear membrane temporarily disappears.
  4. Meiosis gives rise to the haploid condition.
  5. In multicellular organisms mitosis functions primarily in growth.
  6. In plants, a cell plate forms during telophase of mitosis.
  7. The human zygote divides by meiosis.

1. In an experiment, a student cut some potatoes into small, evenly-shaped pieces.

She divided them into groups of 10, weighed each group and placed them in sucrose solutions of different concentration, labelled A to F. Two hours later, she removed the potato pieces from the sucrose solutions, dried them and reweighed them. She plotted her results on a graph (change in mass versus % sucrose solution). The graph is shown below.



* 1. From the graph, determine the concentration of the contents of the potato cells.
  2. Explain in detail why the pieces in solutions D to F lost mass.
  3. Give **one** example of the use of the mechanism(s) described in (b) in food preservation.
  4. Explain how plant cells remain turgid.