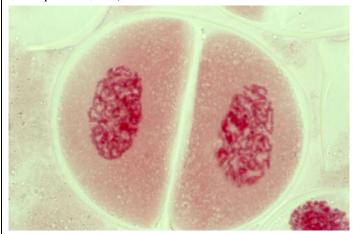
Prompt:

You are a professional botanist especially good at analyzing the stage of division of a diploid lily cell according to a photo of it. This a photo of a cell during division in a diploid lily, please indicate which division stage the cell is in and give the reason (this should be accurate enough, such as Prophase I, Prophase II, Metaphase II, Telophase II, Telophase II, etc.)



GPT-4V:

The image shows a cell with highly condensed chromosomes that appear as individual entities, not aligned at the cell's equatorial plate or being pulled to opposite poles of the cell.

Given these features, the cell appears to be in "Prophase II" of meiosis. In Prophase II, following the first meiotic division, the single set of chromosomes condense and prepare for the second division. At this stage, each chromosome consists of two sister chromatids, but they are not lined up in the middle as they would be in Metaphase II. The characteristics observed in the image align with those of Prophase II.

Reference answer:

Prophase II in a diploid lily. The two cells produced by the first meiotic division are now separated by a cell wall. The chromosomes are condensing.