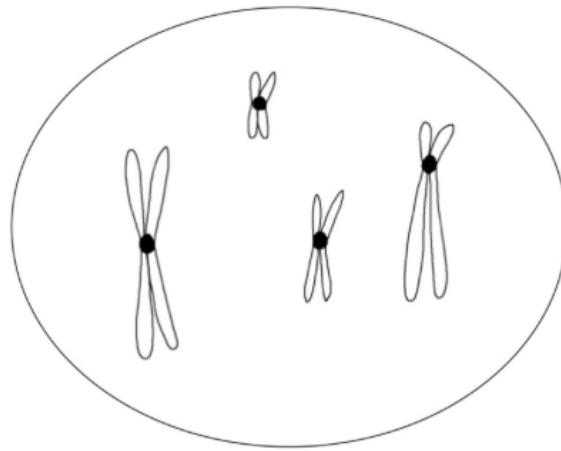


Worksheet #1: Genes, chromosomes & cells

1. Your friend says that the cell shown below contains four diploid chromosomes. Is your friend correct? Please explain fully why or why not. **(2 marks)**



Insert your answer here:

2. Please explain, in your own words, the difference between the terms diploid vs. replicated as they relate to chromosomes. **(2 marks)**

Insert your answer here:

3. Draw a diagram of a eukaryotic cell that satisfies the following criteria: (3 marks)

- The cell is diploid, and contains a total of six chromosomes and 12 DNA molecules
- Two of the chromosomes have centromeres closer to one end of the chromosome
- The remaining chromosomes have centromeres approximately in the middle of the chromosome; two of these chromosomes carry a gene identified as “B”

Insert your answer here: