

Name:
Grade: 8
Biology worksheet

Genes and chromosomes



Exercise one:

The trisomy 21 is a frequent anomaly with well-known symptoms: Oblique eyes, round and flat face, short nose...

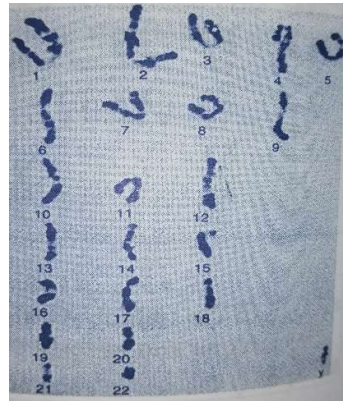
cardiac and digestive malformation and above all mental retardation are frequently associated with these external aspects....

The percentage of children having trisomy 21 as a function of the age of the mother is given in the following table.

Age of mother (in years)	36	38	40	42	44	50
Percentage of trisomy 21 (%)	0.5	1	1.5	2	3	8

- Construct a curve showing the variation of the percentage of trisomy 21 as a function of the age of the mother.
- Interpret the obtained results.

Exercise two: The next diagram shows the karyotype of a human cell.



- To what cell does this karyotype belong?
- What is the sex chromosome present in this karyotype?
- Does this karyotype belong to a man or a woman? Justify your answer.