

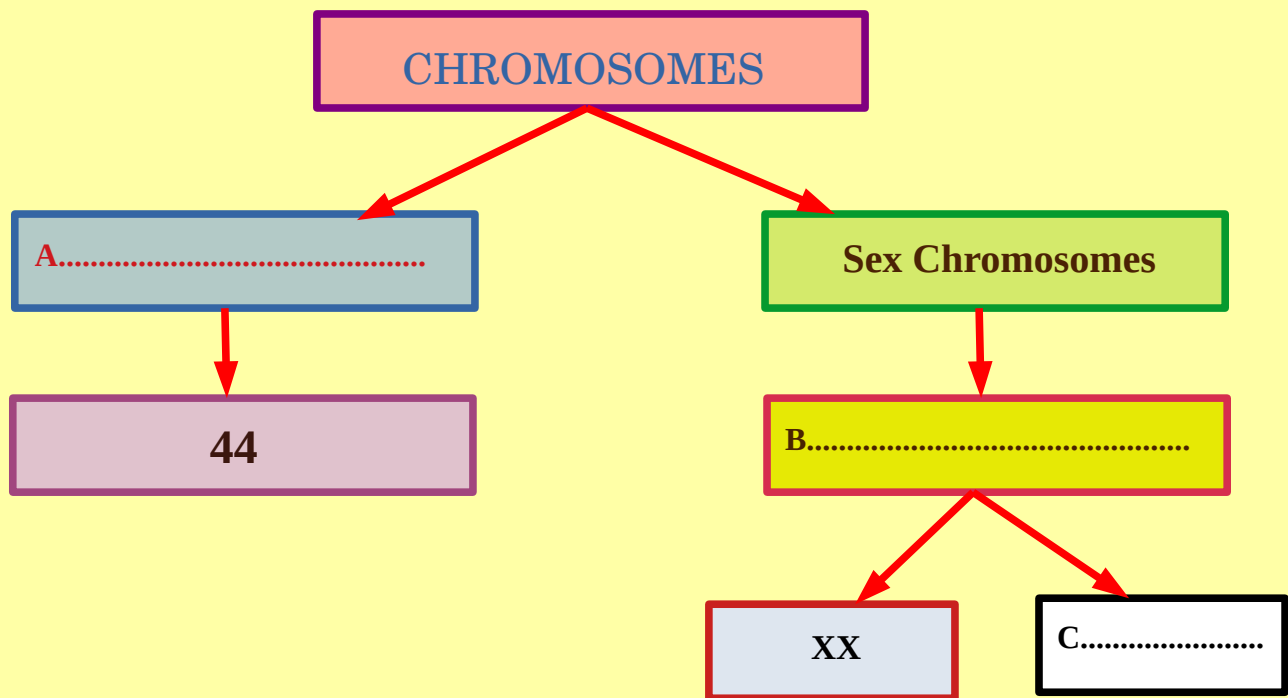


SAMAGRA SHIKSHA, KERALA



**Inter Bell – a DIET and SSK Palakkad Initiative**  
**Student support Material for standard 10 BIOLOGY**  
**UNRAVELLING GENETIC MYSTERIES**  
**WORKSHEET FOR CLASS 41 ON 30-12-20**

1. Fill in the blanks in the illustration related to chromosomes in man.



2. Identify the word pair relationship and fill in the blanks:

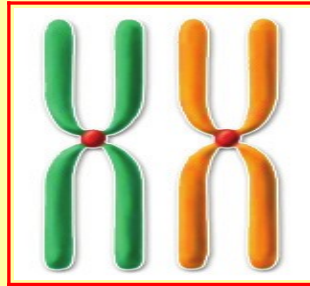
(a) Female : 44 + XX  
Male : .....

(b) Chromosomes pair and exchange their parts : Crossing over  
A sudden heritable changes in the organism : .....

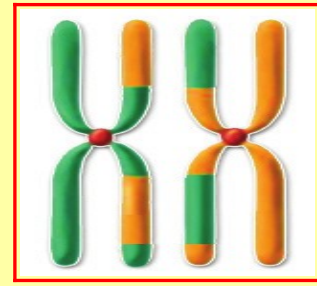
3. Analyse the illustration and answer the following questions.



1



2



3

- Arrange the stages appropriately.
- What is the above illustration indicates?
- What is the significance of this process?

4. A part of the article , ‘Variations in ourself’ is given below.

“The features seen in offspring that are different from their parents are called variations. Certain process taking place in the initial phase of a cell division are responsible for such variations.”

- Name the process which is responsible for variations in the offspring.
- Mention the type of cell division which are responsible for such variations.
- “This process brings about variations in offspring”. How?

5. Vipin wrote the following as situations that create variations in organisms. Choose the right ones.

- a) Mutation
- b) Formation of mRNA
- c) Crossing over of chromosomes
- d) Action of tRNA

6. While reading an online newspaper , Pradeep noticed the below headline. Answer the questions related to it.

**K K Shailaja confirms Coronavirus variant in Kerala**

26 Dec 2020, 11:07 AM IST



Kozhikode: Health Minister K K Shailaja said that the coronavirus found in Kerala has undergone

- a. What is the scientific term used to denote such a sudden change in the genetic constitution of the virus?
- b. What are the reasons responsible for this variation ?

7. Arrange the links that create variations in organisms appropriately:

**Indicators.**

- Crossing over of chromosomes
- Mutation
- Fertilization

Duplication of DNA



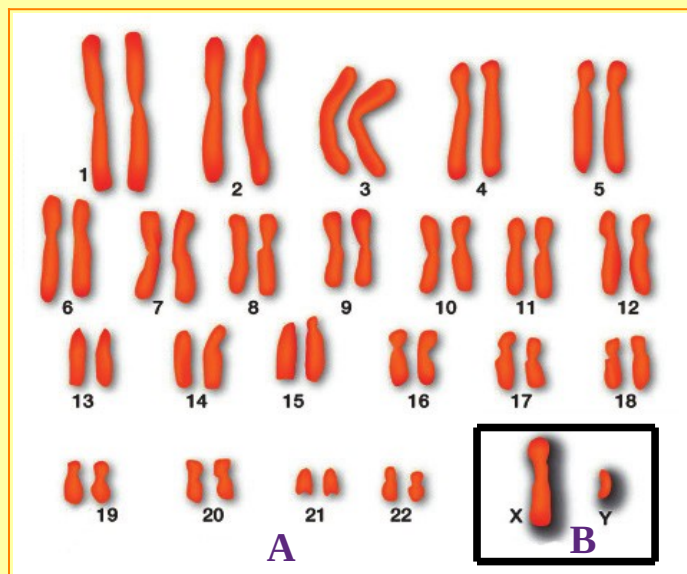
Change in the combination of alleles



Initial phase of meiosis



8. Examine the picture given below and answer the questions.



(a) Identify A and B.

(b) Write the chromosome number of human beings.



To watch the online class again, tap on the image below

