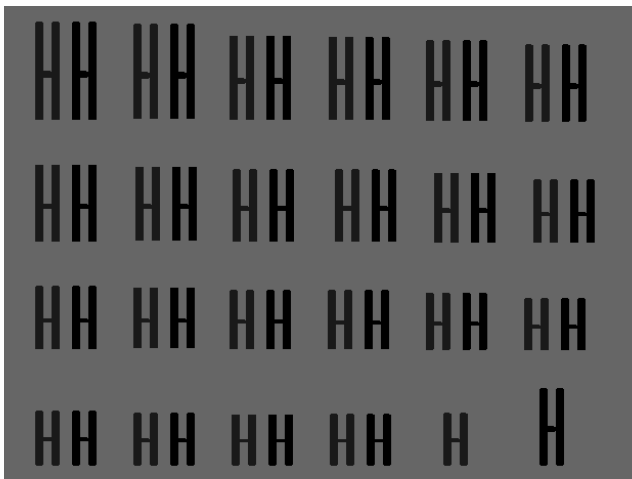


What determines human gender?

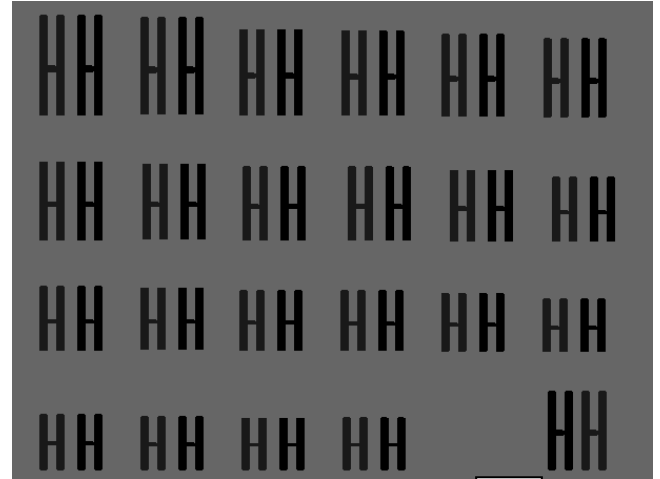
We can examine the chromosomes in a person's cell by creating a karyotype (karyo=nucleus). Each of our cells contains 46 chromosomes, 44 autosomes and two sex chromosomes. **The X chromosome is larger than the Y chromosome.**



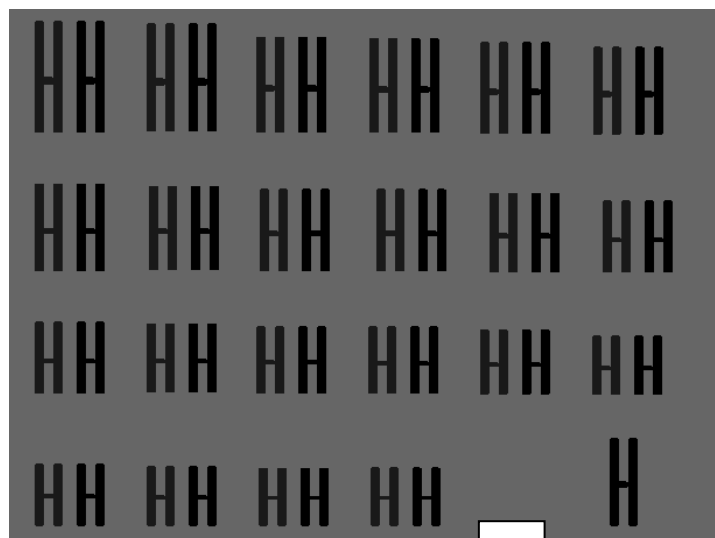
Examine each of the five Karyotypes on the next two pages, and use the Karyotypes to fill in the table.



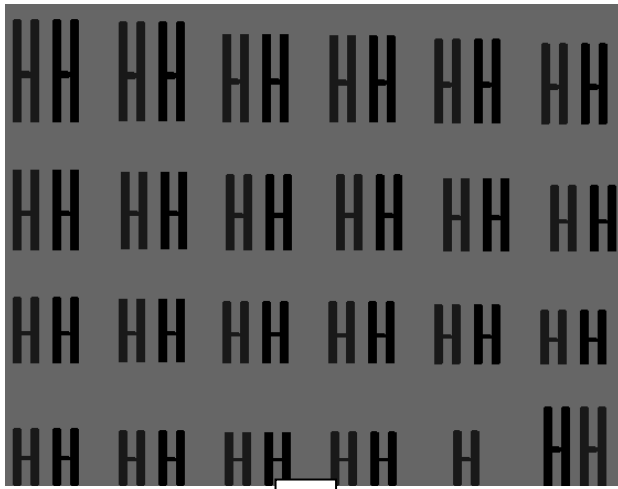
1



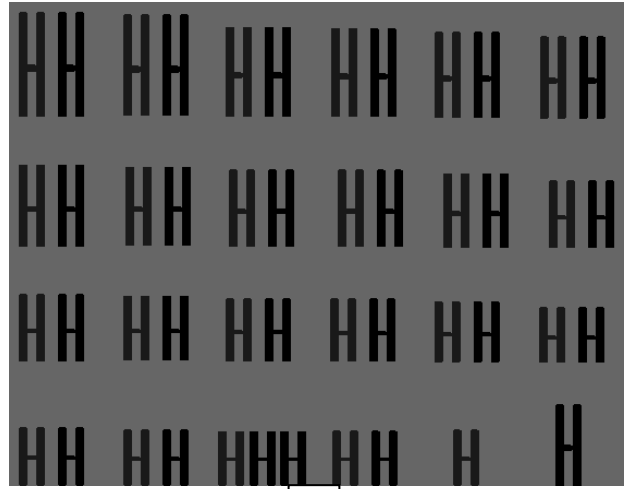
2



3



4



5

- For each karyotype fill in the table below, if karyotype is not for a normal individual, indicate which disorder they would demonstrate.

Picture	# Autosomes	# X chromosomes	# Y chromosomes	Total chromosomes	Normal or Disorder?
1.					
2.					
3.					
4.					
5.					

- Which chromosome determines the sex of a human?
- Do extra or missing chromosomes appear to affect characteristics other than sex?
- Amniocentesis is a process by which a clinician draws amniotic fluid from the sac surrounding a developing fetus. If you wished to determine whether the fetus is a boy, which chromosome would you look for?
- Are the correct numbers of chromosomes in a gamete determined during mitosis or meiosis?