

Sex chromosomes

- A. Are autosomes
- B. Include all chromosomes except the X and Y
- C. Include the X and Y
- D. None of the above

Males are

- A. XX
- B. XY
- C. XX and XY
- D. None of the above

Females rarely get sex-linked disorders because

- A. They have estrogen
- B. They only need one defective gene to get the disorder
- C. They need to get two defective genes to get the disorder
- D. All the above

If a father has hemophilia & the mother is a carrier, then

- A. They can have a hemophilia affected daughter
- B. They will have a hemophilia affected son
- C. They cannot have children
- D. They will have only girls

A mutation

- A. Only occur in RNA
- B. Always changes the organism affected
- C. Never causes problems in proteins
- D. Is a change in a gene due to damage or incorrect copying

Mutations

- A. May affect organisms
- B. Cannot affect organisms
- C. Will affect organisms
- D. None of the above

A pedigree shows

- A. The occurrence of genetic characteristics within a family
- B. A picture of a family's chromosomes
- C. If a family will have male or female children
- D. When a child is normal

Blood types are determined by

- A. Dominant and recessive genes
- B. Polygenic inheritance
- C. Intermediate inheritance
- D. Codominance (multiple allele) inheritance

A child will be Type B blood if

- A. The A allele and the O allele are inherited
- B. The B allele and the O allele are inherited
- C. The A allele and B allele are inherited
- D. Two O alleles are inherited

If both girls and boys get the disorder a parents has, then

- A. The disorder is sex-linked recessive
- B. The disorder is sex-linked dominant
- C. The disorder is autosomal recessive
- D. The disorder is autosomal dominant

The chances a child will get a autosomal recessive disorder is 25% if

- A. One parent is a carrier
- B. Both parents are carriers
- C. Neither parent carries the gene
- D. Both parents have the disorder

If a disorder occurs most commonly in males, then it is probably

- A. Autosomal
- B. Not sex-influenced
- C. Sex-linked or sex-influenced
- D. Not found on the X chromosome

If a disorder is on the X chromosome then

- A. It is sex-influenced
- B. It is sex-linked
- C. It is going to be more common in females
- D. Less common in males

In a class of 100 students, 25 could not roll their tongues (homozygous recessive). Which of the following is true?

- A. All genes in this population are T
- B. 75% of the genes in this population are t
- C. 75% of the genes in this population are T
- D. 50% of the genes in this population are T

If either males or females get a trait more often it could be

- A. Autosomal recessive
- B. Sex-influenced
- C. Sex-linked
- D. None of the above

If a homozygous Type B guy marries a Type O woman, then

- A. Their children will be type A
- B. Their children could have type O
- C. Their children will never be type B
- D. All their children will be type B

There are three phenotypes in

- A. Dominant and recessive inheritance
- B. Polygenic inheritance
- C. Intermediate inheritance
- D. Codominance (multiple allele) inheritance

There are many phenotypes in

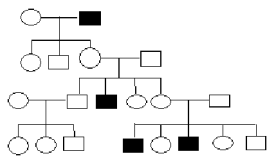
- A. Dominant and recessive inheritance
- B. Polygenic inheritance
- C. Intermediate inheritance
- D. Codominance (multiple allele) inheritance

There are two phenotypes in

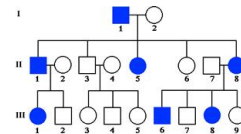
- A. Dominant and recessive inheritance
- B. Polygenic inheritance
- C. Intermediate inheritance
- D. Codominance (multiple allele) inheritance

If a heterozygous B married a heterozygous A, then their children

- A. Will be type AB
- B. Will be type A
- C. Will be type B
- D. Could be type A, type B, type AB, or type O



- A. This trait is probably dominant
- B. This trait is autosomal recessive
- C. This trait is probably sex-linked recessive
- D. This trait is lethal



- A. The trait could be dominant or recessive
- B. The trait could be sex-linked
- C. The trait could be dominant only
- D. The trait could be recessive only

If you knew the number of children born out of 1000 with a disorder you could figure the frequency of carriers

- A. Using a pedigree
- B. Using a karyotype
- C. Using a blood type
- D. Using the Hardy-Weinberg equation

If 18 students out of 200 have a trait, its frequency is

- A. .18 or 18%
- B. .09 or 9%
- C. .045 or 4.5%
- D. .91 or 91%

Sickle-Cell Anemia is a recessive genetic disorder expressed when an child gets "cc". "CC" and "Cc" do not sickle.

A) In the United States, 1 baby in 600 born from two parents of western African descent has Sickle-Cell Anemia. What is the frequency (percentage) of the Americans with western African descent are carriers of the Sickle-Cell Allele?

B) 1 in 2,000 Caucasians of European descent are born with Sickle-Cell Anemia. What is the frequency of Caucasian carriers?