Pedigree Questions

1. Which numbers are the children of 7 and 8? _____________________
2. What do all of the carriers have in common? _____________________
3. What do all those with hemophilia have in common? ______________
4. What relation is number 22 to queen Victoria? ____________________
5. What can you say about Alexis (does he have hemophilia)? ________

Complete the following statement by using inferences (common sense). Circle the right answer choice.

6. For hemophilia, are the mothers or fathers carriers? ______________
7. Do the male offspring or the female offspring get the disease? ______
8. Do all of the sons get hemophilia? ________________________________
9. Are all of the daughters carriers? ________________________________
Pedigree Questions

Hemophilia Pedigree Chart for Queen Victoria and Prince Albert

To make the chart less complicated, 10 individuals have been left off of the 3rd generation and 8 individuals have been left off of the 4th generation.

Queen Victoria _______ 1 _______ Prince Albert _______

Pedigree Questions
26. According to the diagram, which individuals have the trait that is traced by the pedigree?

A. 2 and 3

B. 6 and 10

C. 2, 3, 14 and 15

D. 2, 3, 6, 10, 14 and 15

27. What genetic disorder was found in the Russian royal family?

F. measles

G. AIDS

H. hemophilia

J. cystic fibrosis
28 Which of these statements correctly describes a difference between sex-linked disorders and other inherited genetic disorders?

A  Sex-linked disorders can be passed on from parent to child, but other genetic disorders cannot be passed on.

B  Only males can be affected by sex-linked disorders, but both males and females can be affected by other inherited genetic disorders.

C  The genes for sex-linked disorders are found on sex chromosomes, but the genes for other inherited genetic disorders are found on other chromosomes.

D  The inheritance of a sex-linked disorder within a family can be traced using a pedigree, but other genetic disorders cannot be traced using a pedigree.

29 Alisha and Rob would like to have children. A genetic counselor tells them they are both carriers of a certain genetic disease. What does this mean?

F  They are both immune to the disease, and it is very likely that their children would also be immune.

G  There is a very high probability that one of both of them will develop the disease at some point in the future.

H  They both have the disease, but there is a very low probability that they will pass it on to their children.

J  They both have an allele for the disease and could pass this allele on to their children, even though neither of them is affected by the disease.
30 Which of the following statements about pedigrees is true?

A Squares typically represent males and circles represent females.

B Pedigrees can only be used to trace the occurrence of dominant traits.

C Shaded shapes represent people who do not have a specific trait.

D Pedigrees show all of the allele combinations that are possible in a cross.

31 Jake made the following pedigree chart to trace the traits of straight and curly hair in his family.

A shaded circle or square in Jake’s pedigree represents a person with straight hair. Is straight hair controlled by a dominant allele or a recessive allele? What led to your conclusion? How do you know that straight hair is not sex-linked?

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Pedigree Questions