

Part I: History

- 1) Question 1
 - a) They were the last of the roman monarchy.
- 2) Question 2
 - a) Nicholas II had a brother named Grand Duke Michael
 - b) Nicholas II wife named Tsarina Alexandra,
 - c) Four daughters: Olga, Tatiana, Maria, Anastasia,
 - d) One son: the Tsarevich Alexei
- 3) Question 3
 - a) Tsar
- 4) Question 4
 - a) He abdicated himself because of the successful Bolshevik revolution. The Ural Soviets feared the white Russian army would try to rescue the Tsar and his family, so the were killed.
 - b) Ural Soviets took over control.
- 5) Question 5
 - a) Family of 7, wife husband and 5 kids (1 son and 4 girls).
 - b) They were exiled after the abdication of their father the Tsar.

Part II: Hemophilia

- 1) Question 6
 - a) They both are carriers for hemophilia
- 2) Question 7
 - a) Inherited bleeding disorder, where a person's blood improperly clots
- 3) Question 8
 - a) B
- 4) Question 9

	X	Y
X	XX	XY
x	Xx	xY

- 5) Question 10
 - a) Males are only affected by the gene hemophilia because the hemophilia gene is only carried on the X chromosome. If a male doesn't receive the x chromosome with the hemophilia gene they will not be affected. Females can be carriers and not be affected this makes it less likely for them to be affected.
- 6) Question 11
 - a) Yes, from their mother who is a carrier or affected father.
- 7) Question 12
 - a) Using the Punnett square method, they could have determined the probability of each girl being a carrier, and if they had sons who where affected they would know they are carriers.
- 8) Question 13
 - a) 1:2 or 50%
- 9) Question 14
 - a) 1:2 or 50%
- 10) Question 15
 - a) Females can only be affected by hemophilia if their father is affected, and the mother is at least a carrier.
- 11) Question 16
 - a) The Tsar would not have trusted his phony ways if he couldn't heal their son. This means the people would have restored trust in the Russian government.

References

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