

Biology

Name:

Review for quiz #1

Date: \_\_\_\_\_

Hour:

1. Draw a pedigree for the following family, then number the generations and individuals:

- Attached earlobes are dominant to unattached earlobes
- Dad has attached earlobes; Mom does not
- Dad is homozygous
- They had three kids
- Alexander was born first and has attached earlobes
- Bella also has attached earlobes
- Christopher was born last and doesn't have attached earlobes

2. Draw a Punnett square showing a cross between a mother who carries the hemophilia (h) allele and a father who has the normal allele (H):

3. What is a karyotype?

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4. What is nondisjunction?

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What does it result in?

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5. What condition results if nondisjunction occurs with chromosome #21?

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What are some characteristics of this condition?

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6. Why is someone with blood type O called a universal donor?

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7. Draw a Punnett square for a cross between someone with AB blood and someone with O blood:

What are the offspring genotypes?

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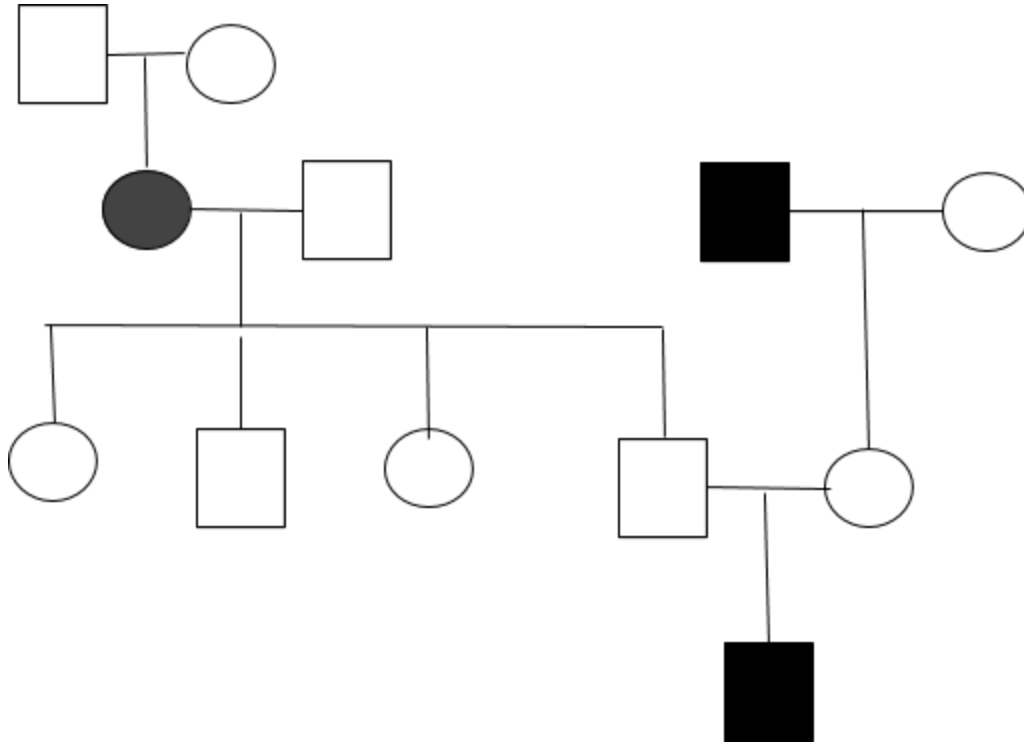
What are the offspring phenotypes?

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8. How many affected males and females are in the pedigree below? \_\_\_\_\_

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9. What determines gender in humans?

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What combination determines female? \_\_\_\_\_ male?

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10. Why do males have a better chance of being red-green color blind? Include a Punnett square in your answer:

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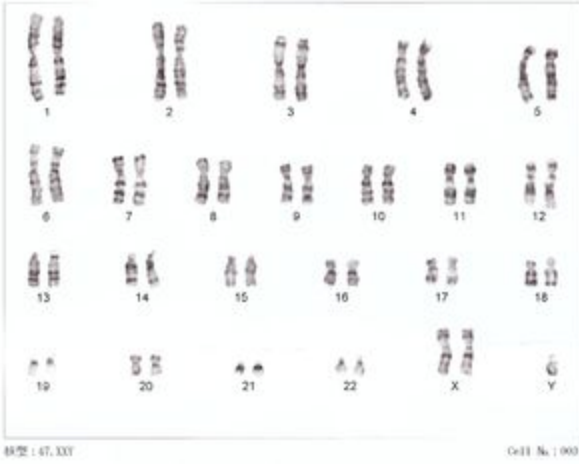
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11. What is monosomy?

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12. What disorder could be determined from the karyotype below?

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13. What gender is the karyotype below?

