

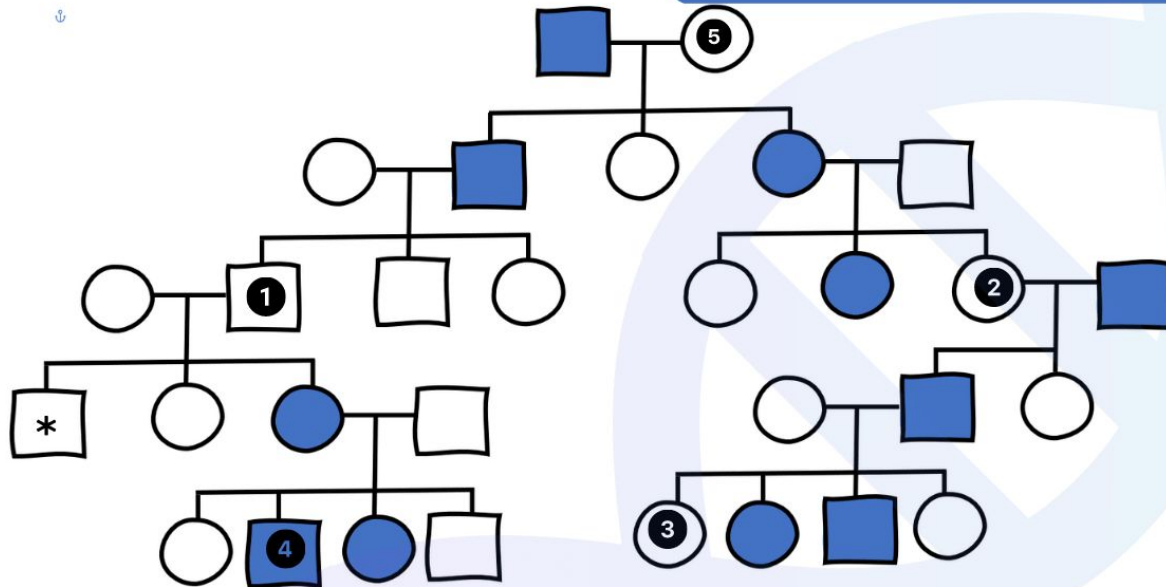
Pedigree Worksheet 6: Autosomal Recessive Traits

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Name _____

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Comprehension Skills



Thalassemia is an inherited neurodegenerative disorder characterized by diminished hemoglobin synthesis. Those afflicted with the disorder may have bone structural problems, dark urine, and splenomegaly, or enlargement of the spleen. The pedigree above illustrates the inheritance patterns of thalassemia in an affected family. Using the pedigree above, answer the following questions:

1. Based on the pedigree above, does the inheritance pattern of thalassemia appear to be X-linked or autosomal? What clues support your conclusion? _____

2. Does the inheritance pattern of thalassemia represent a dominant or recessive disorder? _____

3. After examining the pedigree, you find that thalassemia appears to have skipped an entire 3rd generation immediate family. Why is this? _____

4. Individual IV-1 (marked with an asterisk) is considering having children, but is uncertain about his chances of passing down thalassemia to his children. Is this individual potentially a carrier? Should he be worried? _____

5. List the potential genotypes of each of the following labeled individuals (make sure to define your letter notations of choice): t = thalassemia, T = wild-type (WT)

- a. #1: _____
- b. #2: _____
- c. #3: _____
- d. #4: _____
- e. #5: _____