

VOCABULARY

Match the phrases to the terms below. Each term may be used once, more than once, or not at all.

Phrases

1. A self-replicating, DNA-containing structure found in the nucleus of a cell
2. The basic unit of heredity
3. One of the variant forms of a gene
4. A test used to discover if a fetus carries a genetic abnormality
5. The complete DNA sequence of an individual
6. The molecule that encodes genetic information
7. The proportion of total phenotypic variation that is due to genetic variation

Terms

allele	Fragile X
amniocentesis	gene
chromosome	genome
clone	heritability
correlation	multivariate genetic analysis
DNA	

Ans: 1. chromosome; 2. gene; 3. allele; 4. amniocentesis; 5. genome; 6. DNA; 7. heritability

Blooms Level: Remembering

Difficulty Level: Moderate

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Topic: Overview

TRUE/FALSE

1. One of the most important changes in the behavioral sciences in the past 30 years is the recognition that genes influence almost all behaviors.

Ans: True

Blooms Level: Understanding

Difficulty Level: Easy

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Topic: Overview

2. If genes influence a behavior, we would expect identical twins to be more similar for that behavior than nonidentical (fraternal) twins.

Ans: True

Blooms Level: Understanding

Difficulty Level: Moderate

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Topic: Overview

3. Among the childhood psychopathologies, autism spectrum disorders and ADHD are the most genetically influenced.

Ans: True

Blooms Level: Remembering

Difficulty Level: Easy

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Topic: Overview

4. Antisocial behavior in adolescence is highly heritable.

Ans: False

Blooms Level: Understanding

Difficulty Level: Moderate

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Topic: Overview

5. Genes only influence disordered behavior.

Ans: False

Blooms Level: Understanding

Difficulty Level: Moderate

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Topic: Overview

6. Weight is almost as influenced by genes as height.

Ans: True

Blooms Level: Understanding

Difficulty Level: Easy

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Topic: Overview

7. Personality and cognitive ability vary from person to person in large part due to genetic differences between people.

Ans: True

Blooms Level: Applying

Difficulty Level: Difficult

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8. Many cases of early-onset Alzheimer disease are caused by single-gene mutations.

Ans: True

Blooms Level: Remembering

Difficulty Level: Easy

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Topic: Overview

9. No cure for Alzheimer disease has been discovered, so it is worthless that single-gene causes for the disease have been identified.

Ans: False

Blooms Level: Analyzing

Difficulty Level: Difficult

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10. Late-onset Alzheimer disease is not influenced by genetics.

Ans: False

Blooms Level: Understanding

Difficulty Level: Moderate

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Topic: Overview

11. It is now possible to get a genetic test for a gene variant that influences risk for late-onset Alzheimer disease.

Ans: True

Blooms Level: Applying

Difficulty Level: Difficult

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Topic: Overview

12. Down syndrome is caused by a problem in a single gene.

Ans: False

Blooms Level: Understanding

Difficulty Level: Difficult

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Topic: Overview

13. Gene influence on cognitive ability decreases over the course of a lifetime.

Ans: False

Blooms Level: Remembering

Difficulty Level: Easy

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Topic: Overview

14. Cognitive ability in adulthood is not nearly as influenced by genes as is height.

Ans: False

Blooms Level: Remembering

Difficulty Level: Easy

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Topic: Overview

15. The family environment is the most important cause of similarities in behavior among family members.

Ans: False

Blooms Level: Understanding

Difficulty Level: Moderate

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Topic: Overview

16. The environment is not an important cause of individual differences in behavior.

Ans: False

Blooms Level: Remembering

Difficulty Level: Moderate

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Topic: Overview

PROBLEMS

1. Parents who play chess with their children have children who do better in school. Does this mean that playing chess is an environmental cause for better academic achievement?

Ans: Not necessarily. A correlation does not prove causation. It might be that parents and children who like to play chess together do so because they share a similar genetic constitution and this constitution makes the children do better in school.

Blooms Level: Analyzing

Difficulty Level: Moderate

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Topic: Overview

2. Explain the statement, “To some extent, people create their own experiences for genetic reasons.”

Ans: Since many environmental measures used in behavioral sciences show genetic influences, it is likely that these environmental outcomes (like parenting, childhood accidents, life events, social activities, etc.) come about in part because of the genetic constitution of the person, acting through characteristics like personality and cognitive style.

Blooms Level: Analyzing

Difficulty Level: Difficult

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Topic: Overview