DNA technology/genetic engineering

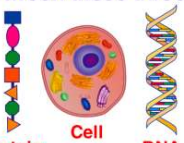
BIO

Name _____ Class _____ Date _____

1 Which process is **least likely** to **add** to the variety of traits in a population?

A deletion of bases from DNA
B genetic engineering
C accurate replication of DNA
D exchange of segments between chromosomes

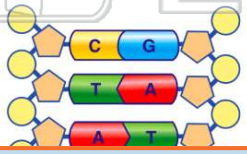
2 What is the **relationship** between these three structures?



A DNA is made up of proteins that are synthesized in the cell.
B Protein is composed of DNA that is stored in the cell.
C DNA controls the production of protein in the cell.
D The cell is composed only of DNA and protein.

3 The **genetic code** of a DNA molecule is determined by a **specific sequence** of

A ATP molecules
B sugar molecules
C chemical bonds
D molecular bases



4 To produce large tomatoes that are resistant to cracking and splitting, some seed companies use the pollen from one variety of tomato plant to **fertilize** a different variety of tomato plant. This process is an example of

A selective breeding
B DNA sequencing

5 T
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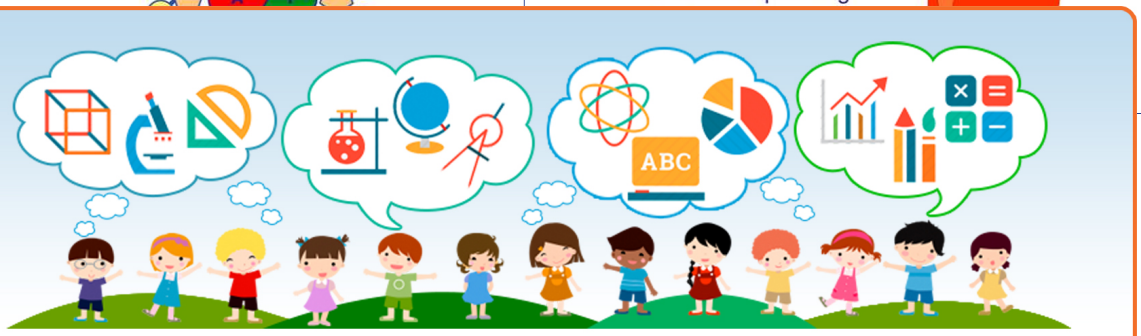
A
B
C
D



7 H
h
A
B
C chromosome number
D shape and size

B joining amino acids in sequence → a change in the sequence of DNA bases → appearance of characteristic
C appearance of characteristic → joining amino acids in sequence → a change in the sequence of DNA bases
D a change in the sequence of DNA bases → appearance of characteristic → joining amino acids in sequence

9 Arrange the following structures from **largest** to **smallest**.

A chromosome, nucleus, gene
B nucleus, chromosome, gene
C gene, nucleus, chromosome
D nucleus, gene, chromosome

10 The nucleus is removed from a body cell of one organism and is placed in an egg cell that has had its nucleus removed. This **process**, which results in the production of organisms that are **genetically alike**, is known as

A cloning
B fertilization
C biological adaptation
D DNA production

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ANSWER KEY

Which process is **least likely** to **add** to the variety of traits in a population?

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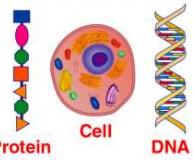

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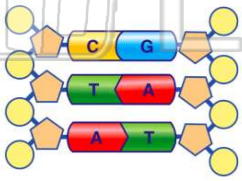

d

To produce large tomatoes that are resistant to cracking and splitting, some seed companies use the pollen from one variety of tomato plant to **fertilize** a different variety of tomato plant. This process is an example of

A selective breeding
B DNA sequencing
C direct harvesting

a

T
g
A
B
C
D

H
h
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B
C
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characteristic
C appearance of characteristic → joining amino acids in sequence → a change in the sequence of DNA bases
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Arrange the following structures from **largest** to **smallest**.

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a