Clue # 2

DID YOU KNOW?

DNA is made [illegible] olecules called nucleotides.

DNA is the [illegible] enter where [illegible] erything begins. DNA, also known as deoxyribonu[illegible] acid [illegible] lecul[illegible] carries genetic instructions or a blueprint for your body. Hum[illegible] begin [illegible] a single [illegible] ell, but that one cell divides into two cells, then four c[illegible] then eight cells. E[illegible], humans have trillions of cells. Francis Crick an[illegible] James Wat[illegible] England [illegible] covered the structure of DNA in 1953. DNA molecules h[illegible] e helix shap[illegible] ind of like a twisted ladder. DNA determines traits s[illegible] as gende[illegible] eight, hair colo[illegible] and eye color.

DNA is carrie[illegible] the chromosome. A ch[illegible] some is a threadlike structure inside a cell that carr[illegible] DNA. Chromosom[illegible] arry the "recipe" for the cells. DNA has four bases, called G (guanine), C (cyto[illegible]), A (adenine), and T (thymine). These chemicals are the genetic code. A[illegible] ys pairs with T[illegible] nd G always pairs with C. The order of these bases is f[illegible] genetic instructions).

DNA stays inside the [illegible], so it creates and sen[illegible] RNA outside the nucleus into the cytoplasm. From here, RNA forms proteins, and [illegible] e proteins determine life.

Genes can be found inside the DNA. G[illegible] the ba[illegible] units of heredity. They are very small and can only be se[illegible] owerful microscope.

Question

How man[illegible]ases does DN[illegible]?

A. [illegible]

4

6

8

Question

Overall, each person has a[illegible]...



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Clue # 3

DID YOU KNOW?

Non-sex chromosomes are called autosomes.

Humans have 23 pairs of chromosomes, which equals 46 chromosomes. Living organisms have various amounts of chromosomes. For instance, an elephant has 56 chromosomes, while a potato has 48 chromosomes; and roundworms have 2 chromosomes, while hermit crabs have up to 254 chromosomes.

A pair of chromosomes is responsible for a baby being a boy or girl. Chromosomes are labeled X and Y. A cell with one X and one Y chromosome will be male. A cell with two X chromosomes will be female.

A mother and father both pass chromosomes to the baby. These sets of genes determine the baby's traits. Each gene is responsible for one trait, like dimples, eye color, and hair color. Dominant genes are genes that are stronger and more common.

To determine the possible combinations of alleles offspring may inherit, scientists use a Punnett square named after Reginald Punnett. A Punnett square uses four squares set in a square. One parent's alleles are written on the left, and the other parent's alleles are written on the top. Then you fill in the square. If both parents have the same alleles, the offspring would also have those same alleles. This is called homozygous. Heterozygous, on the other hand, means different alleles for the same gene. This indicates there are two possibilities for the offspring.

Question

How many total chromosomes do humans have?

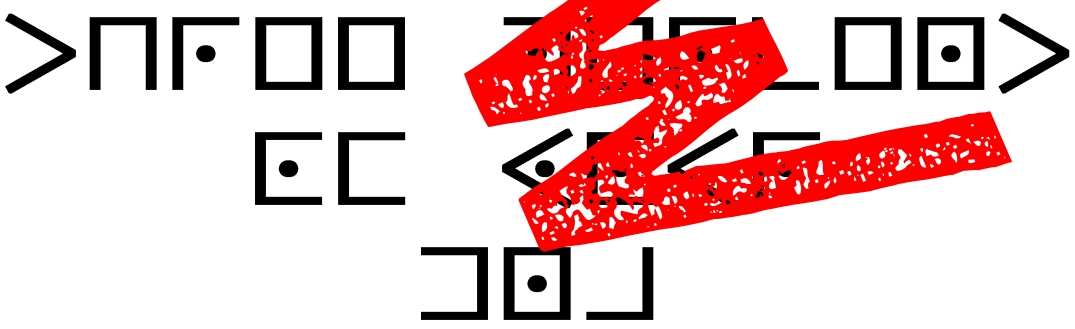
A. 44

B. 46

C. 54

Question

Genes make up only about





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1 Digit Code

First number of code :
The percent that humans are genetically identical
MINUS 96. _____

Second number of code :
Genes make up ___ percent of your DNA. _____

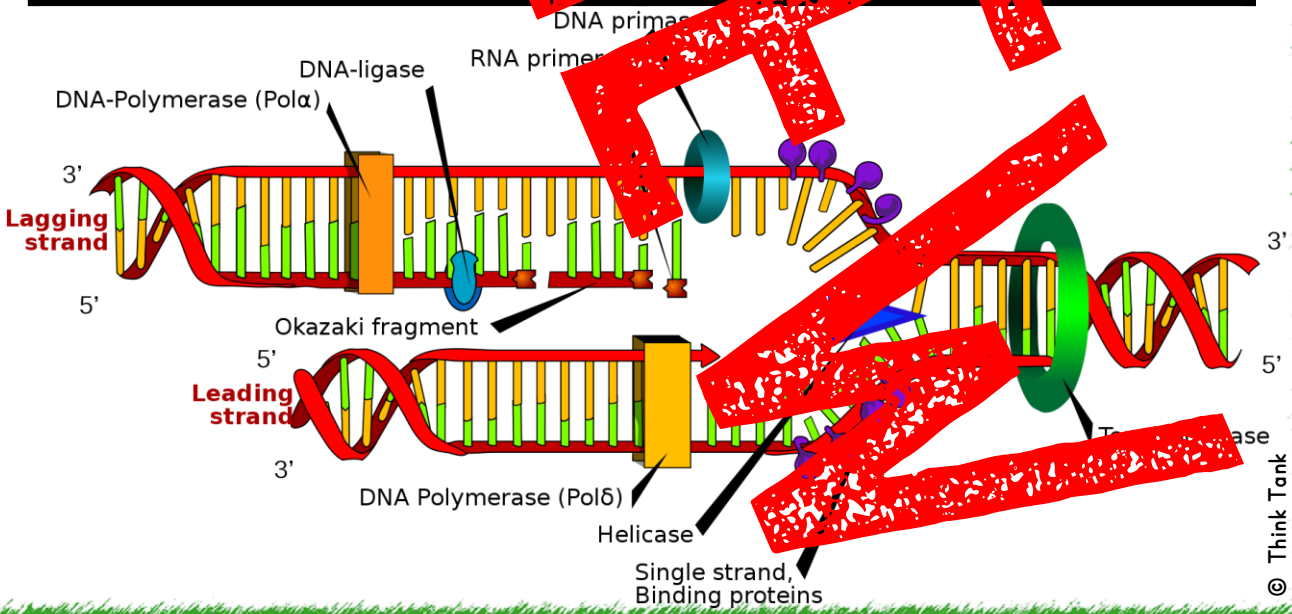
Third number of code :
What number is represented by
" . . _ _ _ " ? _____

Last number of code :
What number is the letter "E" in chemical? _____

1. DNA is carried in the _____ A. Alveoli B. Riboflavin C. Nucleus D. Chromosome	4. Predicting a single trait is known as a ____ cross. A. Monohybrid B. Dihybrid C. Trihybrid D. Nanohybrid
2. Who is considered the Father of Genetics? A. Watson B. Crick C. Punnett D. Mendel	5. What does the base "A" always pair with? A. R B. G C. C D. T
3. ____ means different alleles for the same gene. A. Heterozygous B. Autosomes C. Homozygous D. Alveoli	6. What did Mendel experiment with first to study patterns of inheritance? A. Sunflower seeds B. Honey bees C. Pea plants D. House flies

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A =	N = 12
B =	O = 7
C = 6	P =
D =	Q =
E =	R = 16
F =	S = 13
G =	T =
H = 25	U = 15
I =	V =
J =	W = 21
K =	X =
L =	Y = 17
M =	Z =



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	1	2	3	4	5
1	D				C
2	K			J	F
3		P		O	M
4	T	R			S
5		Z	X		

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HELPS US

RETAIN

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