BIOLOGY DATA

Symbols

Symbol	Description	Symbol	Description
D_p	population density	3	male
N	number of individuals in a population	P	female
A	area occupied by a population	n	chromosome number
V	volume occupied by a population	<i>B</i> , <i>b</i>	alleles: upper case is dominant, lower case is recessive
t	time	$I^{\mathrm{A}}, I^{\mathrm{B}}, i$	alleles, human blood type (ABO)
Δ	change in	Р	parent generation
K	carrying capacity	F ₁	first filial generation
gr	growth rate	F ₂	second filial generation
cgr	per capita growth rate	p	frequency of dominant allele
>	greater than, dominant over	q	frequency of recessive allele
<	less than, recessive to		

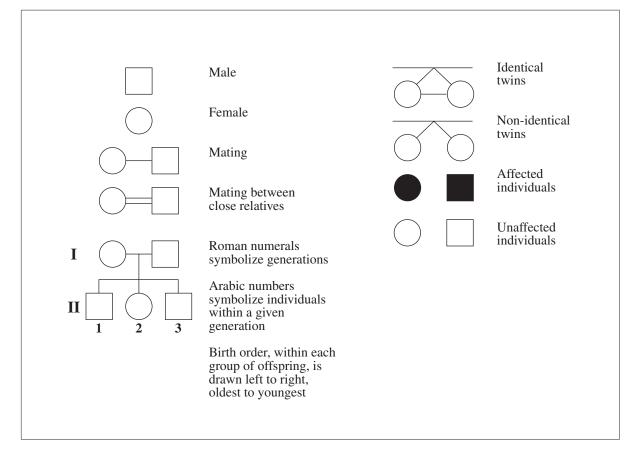
Equations

Subject	Equation
Hardy–Weinberg principle	$p^2 + 2pq + q^2 = 1$
Population density	$D_p = \frac{N}{A}$ or $D_p = \frac{N}{V}$
Change in population size	$\Delta N =$ (factors that increase pop.) – (factors that decrease pop.)
Growth rate	$gr = \frac{\Delta N}{\Delta t}$
Per capita growth rate (time will be determined by the question)	$cgr = \frac{\Delta N}{N}$

Abbreviations for Some Hormones

Hormone	Abbreviation
Adrenocorticotropic hormone	ACTH
Antidiuretic hormone	ADH
Follicle-stimulating hormone	FSH
Gonadotropin-releasing hormone	GnRH
Human chorionic gonadotropin	hCG
Human growth hormone	hGH
Luteinizing hormone	LH
Parathyroid hormone	PTH
Prolactin	PRL
Thyroid-stimulating hormone	TSH

Pedigree Symbols



First Base	Second Base				Third Base
	U	С	А	G	
U	UUU phenylalanine	UCU serine	UAU tyrosine	UGU cysteine	U
	UUC phenylalanine	UCC serine	UAC tyrosine	UGC cysteine	С
	UUA leucine	UCA serine	UAA stop**	UGA stop**	А
	UUG leucine	UCG serine	UAG stop**	UGG tryptophan	G
С	CUU leucine	CCU proline	CAU histidine	CGU arginine	U
	CUC leucine	CCC proline	CAC histidine	CGC arginine	С
	CUA leucine	CCA proline	CAA glutamine	CGA arginine	А
	CUG leucine	CCG proline	CAG glutamine	CGG arginine	G
А	AUU isoleucine	ACU threonine	AAU asparagine	AGU serine	U
	AUC isoleucine	ACC threonine	AAC asparagine	AGC serine	С
	AUA isoleucine	ACA threonine	AAA lysine	AGA arginine	А
	AUG methionine*	ACG threonine	AAG lysine	AGG arginine	G
G	GUU valine	GCU alanine	GAU aspartate	GGU glycine	U
	GUC valine	GCC alanine	GAC aspartate	GGC glycine	С
	GUA valine	GCA alanine	GAA glutamate	GGA glycine	А
	GUG valine	GCG alanine	GAG glutamate	GGG glycine	G

Messenger RNA Codons and Their Corresponding Amino Acids

*Note: AUG is an initiator codon and also codes for the amino acid methionine.

**Note: UAA, UAG, and UGA are terminator codons.

Information about Nitrogen Bases

Nitrogen Base	Classification	Abbreviation
Adenine	Purine	А
Guanine	Purine	G
Cytosine	Pyrimidine	С
Thymine	Pyrimidine	Т
Uracil	Pyrimidine	U