



Inheritance Key Terms

Diploid



Gene



Allele



Genotype



Phenotype



Dominant Allele



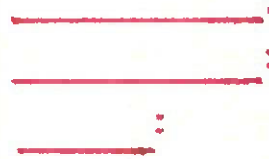
Recessive Allele



Codominant Allele



Homozygous



Heterozygous



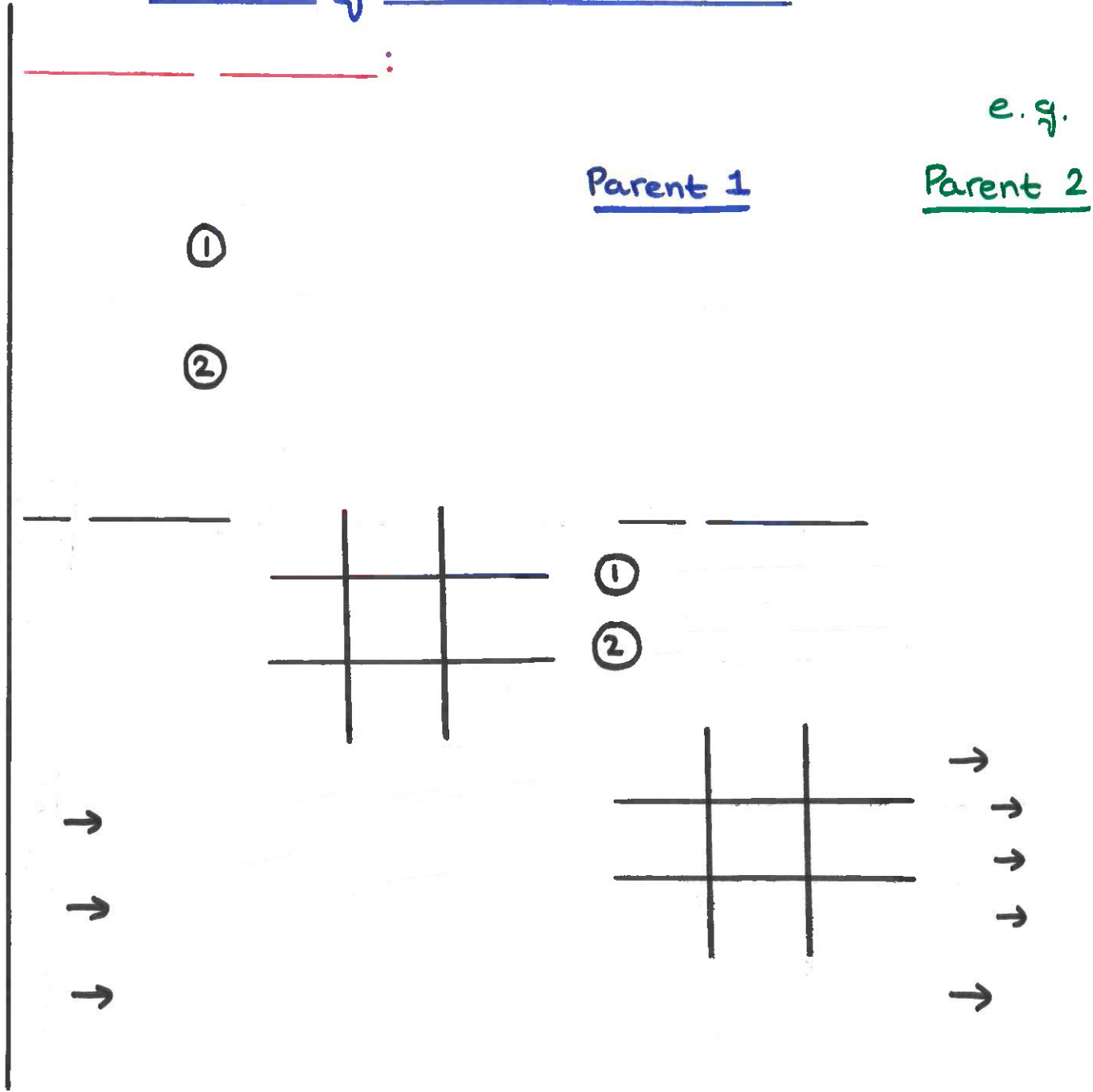
Locus





Mono hybrid Inheritance

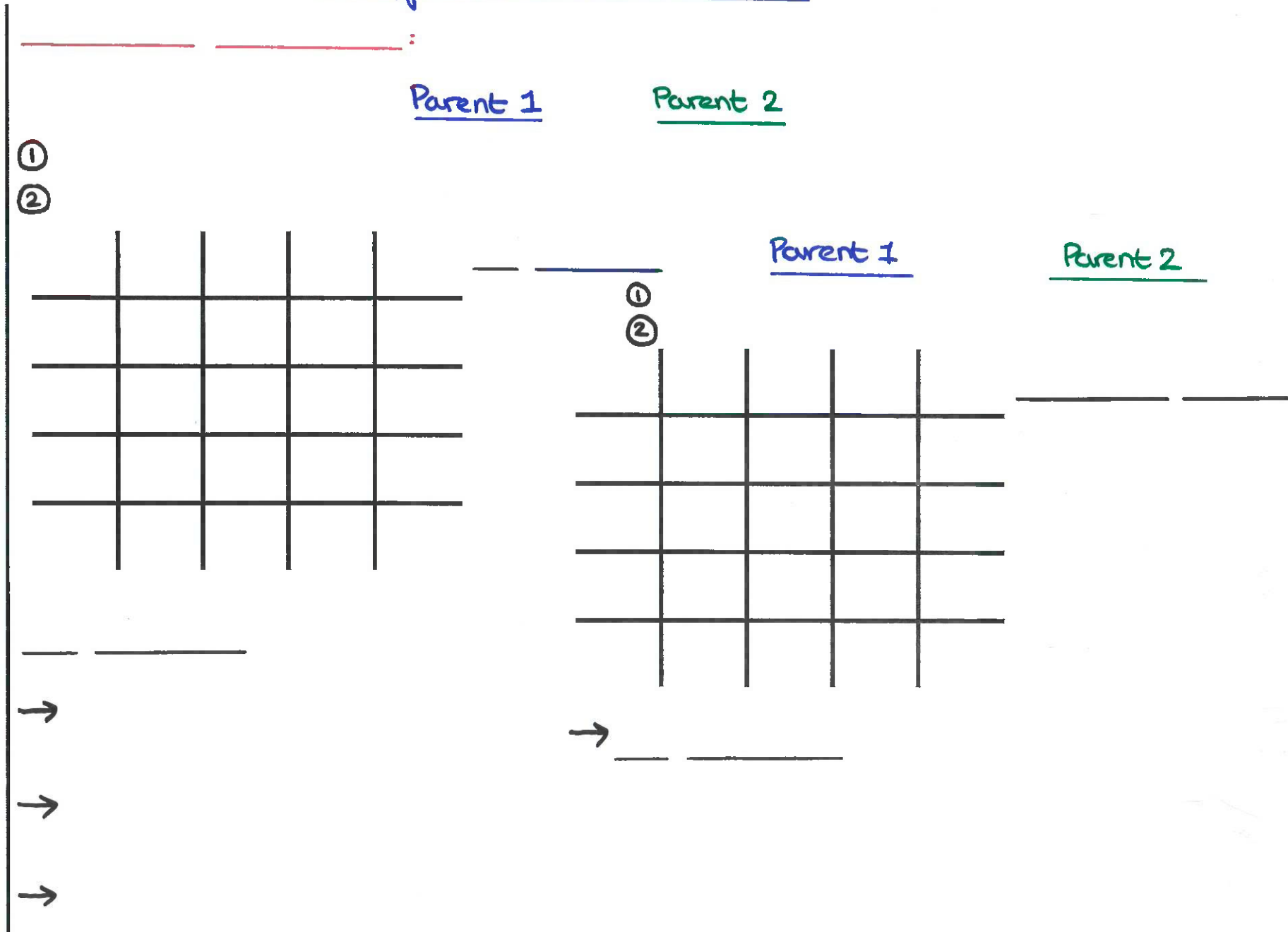
Mono hybrid Inheritance





Dihybrid Inheritance

- 1
- 2
- 3
- 4
- 5





Codominance & Multiple Alleles

ABO Blood Group System

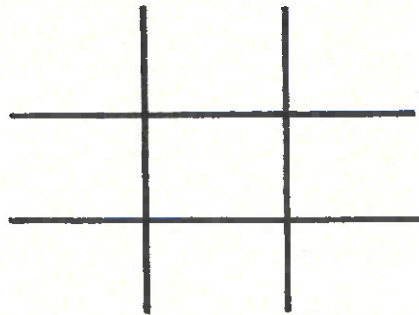
-
-
-

Parent 1

Parent 2

①

②



F₁ Generation:

Genotype :

Phenotype :

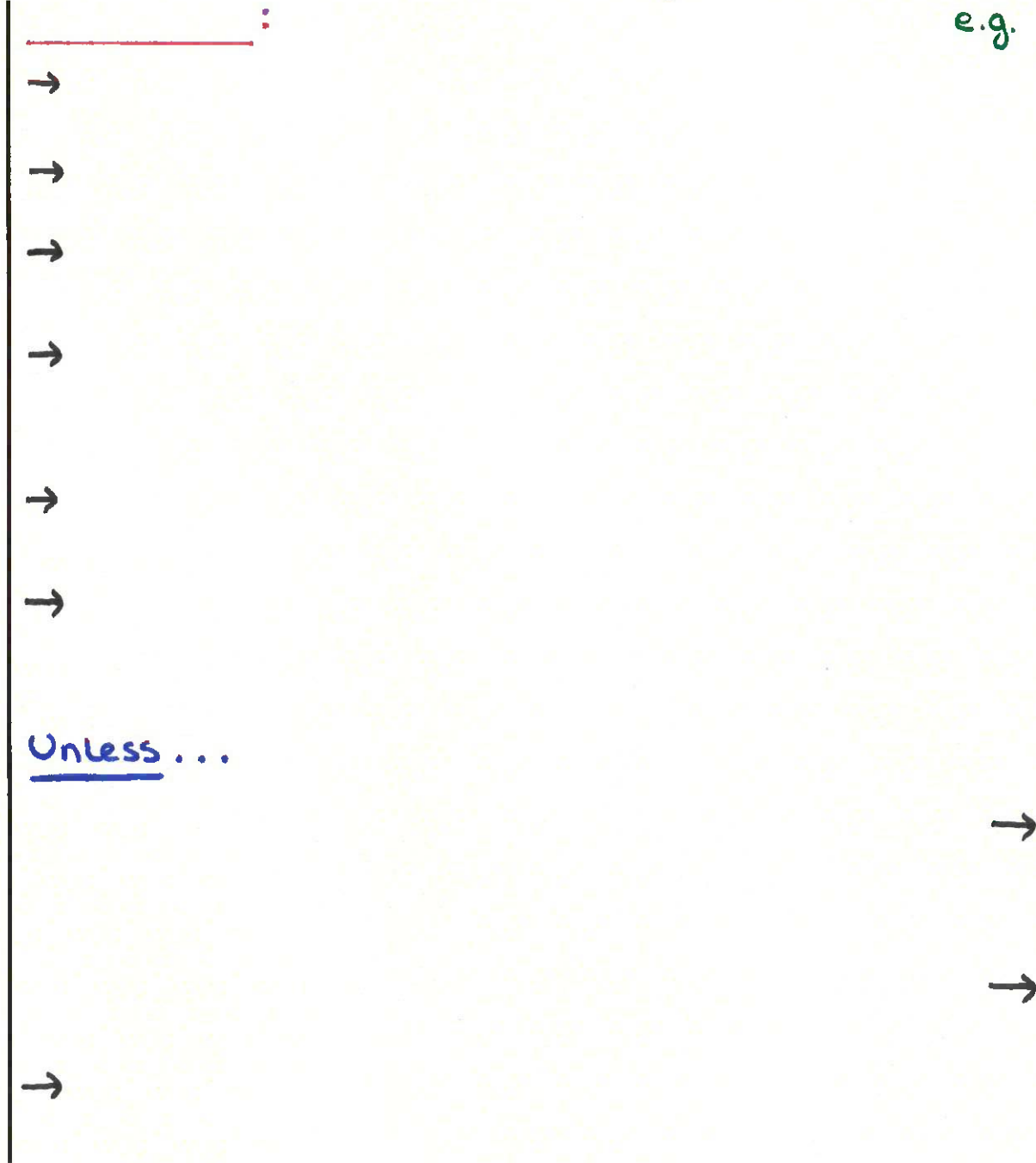


Autosome

Autosomal Linkage

- 1
- 2
- 3
- 4
- 5

e.g.





Homologous Pair

Sex Linkage



Sex Chromosomes

Female = →

Males = →

Haemophilia

→

↳

→

↳

Phenotypic Ratio :

:

:

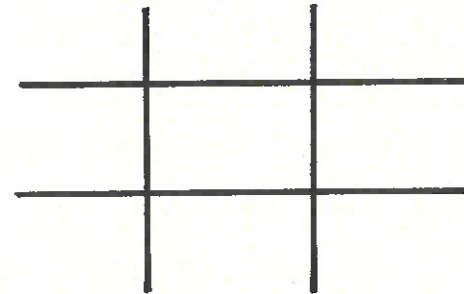
Sex Linkage

Parent 1

Parent 2

①

②



Phenotypic Ratio

:

F₁ Genotypes

Phenotypes

="="="="



Epistasis

Epistasis





Normal Phenotypic Ratios

Exceptions →	Parents	F ₁ Phenotypic Ratio →	F ₂ Phenotypic Ratio →
Monohybrid Cross			
Dihybrid Cross			
Codominant			



Non-Normal Phenotypic Ratios

1 2 3 4 5

Epistasis

Recessive Epistatic
Allele

Dominant Epistatic
Allele

Parents :

F₁ :

F₂ :

Red

Blue

Albino

Albino

Red

Blue



Non-Normal Phenotypic Ratios

- 1
- 2
- 3
- 4
- 5

Sex Linkage

Autosomal Linkage



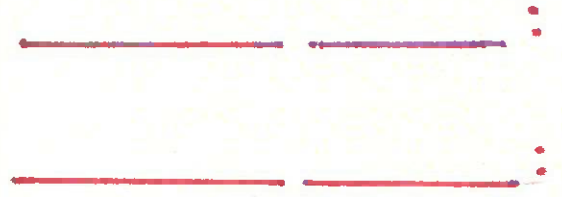
No linkage

With Autosomal linkage

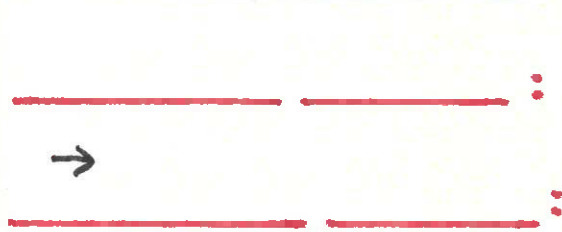


Variation

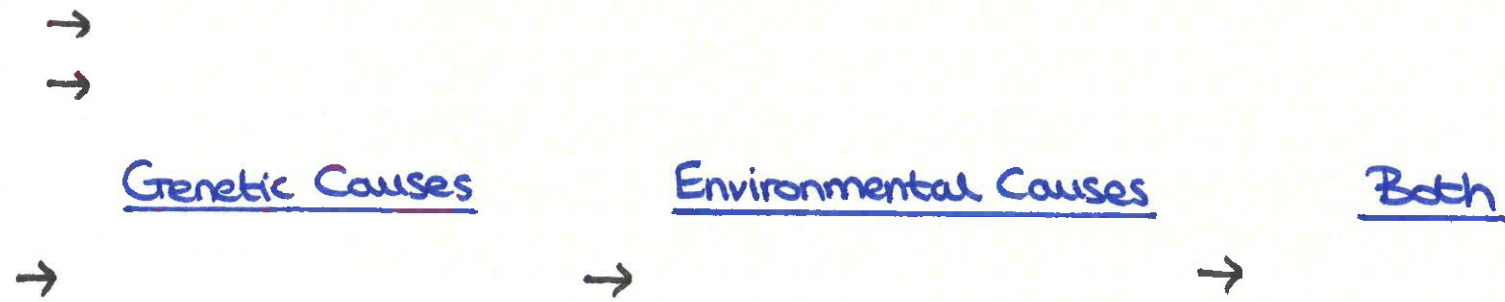
Intra Specific Variation



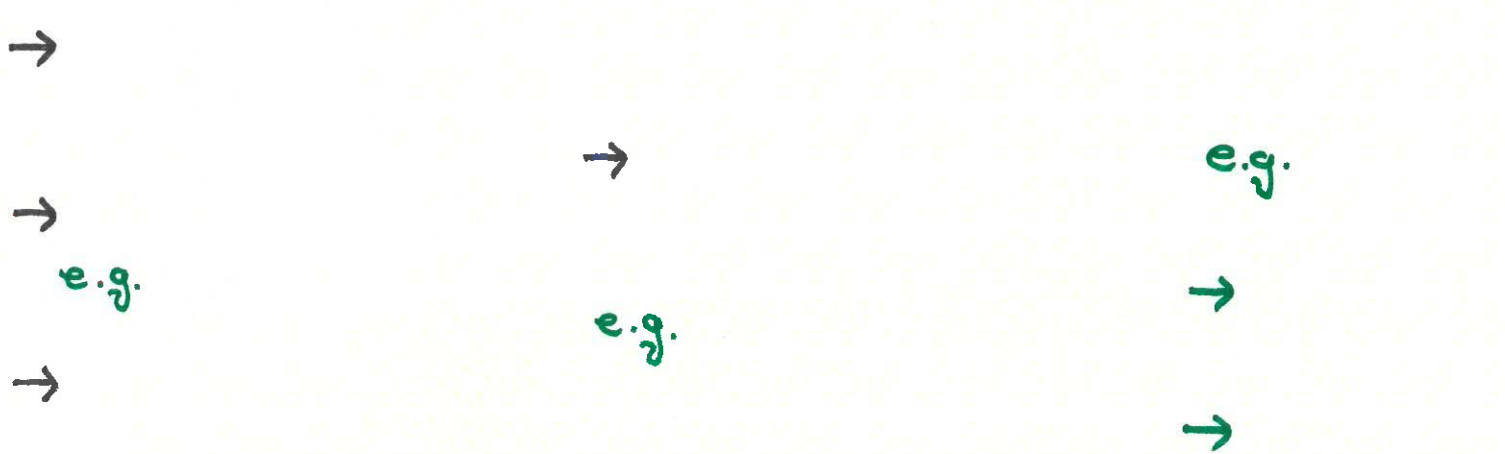
Interspecific Variation



Continuous Variation



Discontinuous Variation





Meiosis & Genetic Variation

1 2 3 4 5

Crossing Over

Independent Segregation





Random Fertilisation

- 1
- 2
- 3
- 4
- 5

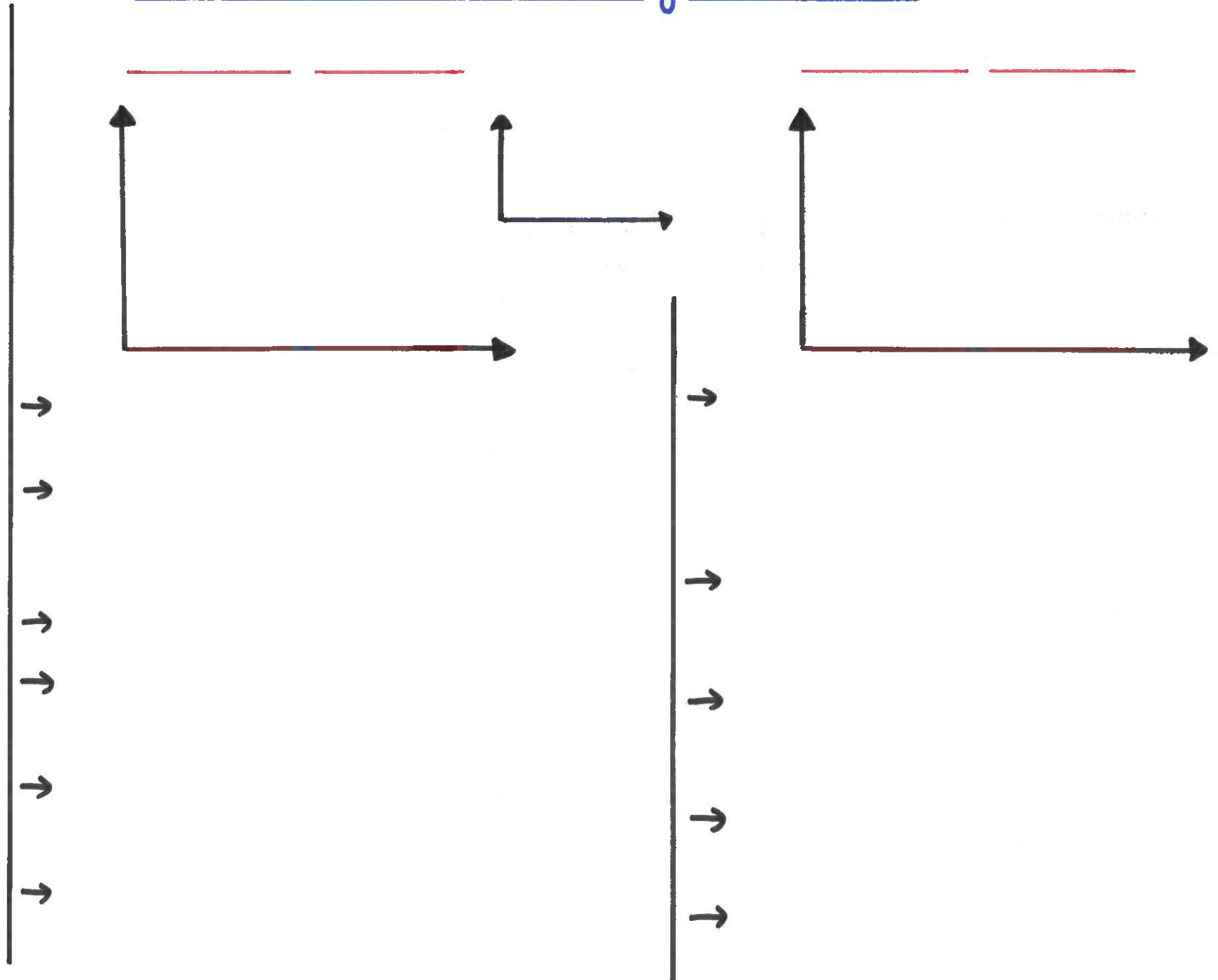
♂

♀



Directional & Stabilising Selection

- 1
- 2
- 3
- 4
- 5





Genetic Bottlenecks & The Founder Effect 1 2 3 4 5

Genetic Bottleneck

Founder Effect

Original Colony





TT

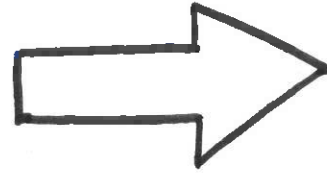
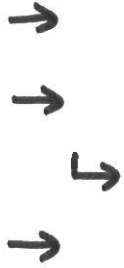
Genetic Drift

- 1
- 2
- 3
- 4
- 5

Genetic Drift

_____ :

e.g.





Population Key Terms

Species

_____ :

Population

_____ :



Community

_____ :

Gene Pool

_____ :

e.g.

Allele Frequency

_____ :

_____ :

Evolution

Differential Reproductive Success

_____ :

Speciation



The Hardy-Weinberg Principle

The Hardy-Weinberg Principle

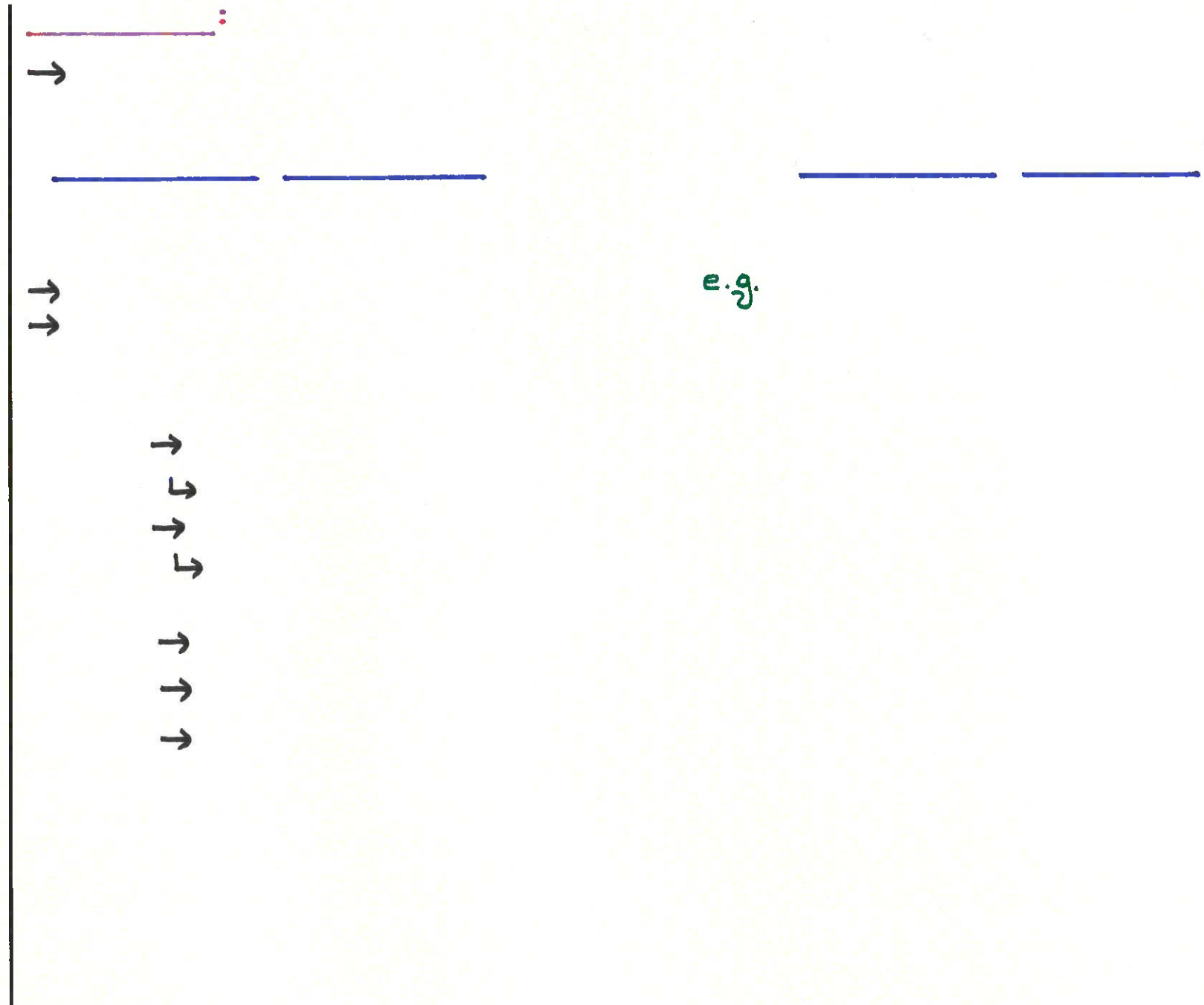
<u>Predictions</u>	<u>Equation</u>
→	+ =
↳	+ =
<u>Assumptions</u>	→
→	+ + =
→	
→	
→	
→	<u>Question</u> 51% Unbanded bb = banded
→	



Speciation

Speciation

- 1
- 2
- 3
- 4
- 5



e.g.



Artificial Selection

- 1
- 2
- 3
- 4
- 5

Artificial Selection

e.g.

Dairy Cow

Wheat / Corn

-
-
-
-
-
-
-
-
-

-
-
-
-
-
-
-
-
-

Advantages

Disadvantages