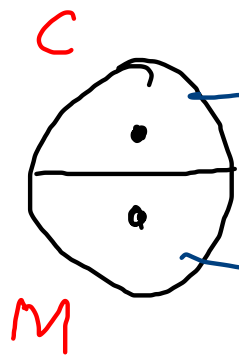


Development of dicot embryo ⇒

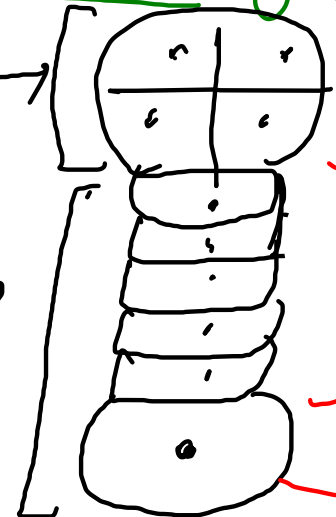


Mitotic div. ⇒



Terminal cell

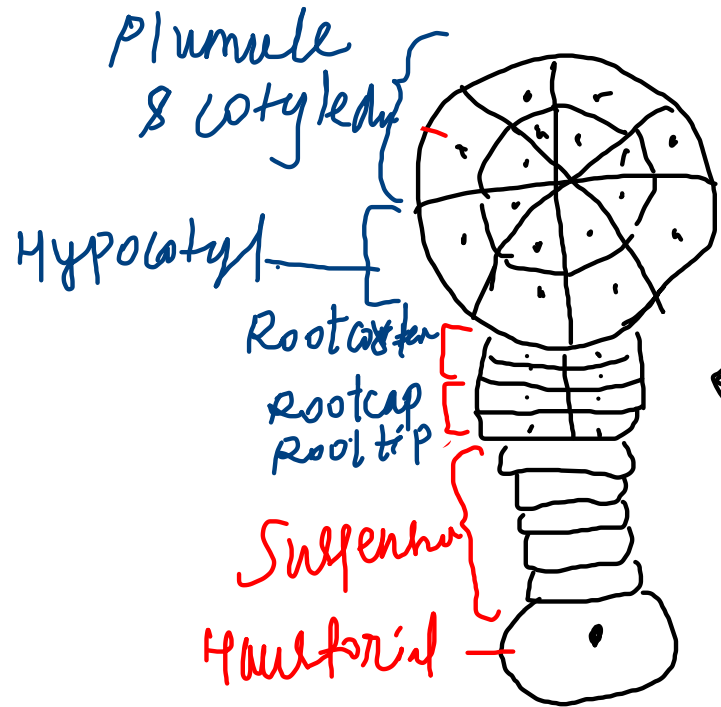
Basal cell



Proembryonal quadrant

Suspensor

Haustorial cell



Plumule
8 cotyledons

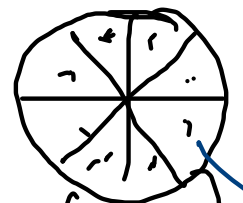
Hypocotyl

Root cap
root tip
Root cap

Suspensor

Haustorial

Periclinal div. in octant



Proembryonal octant

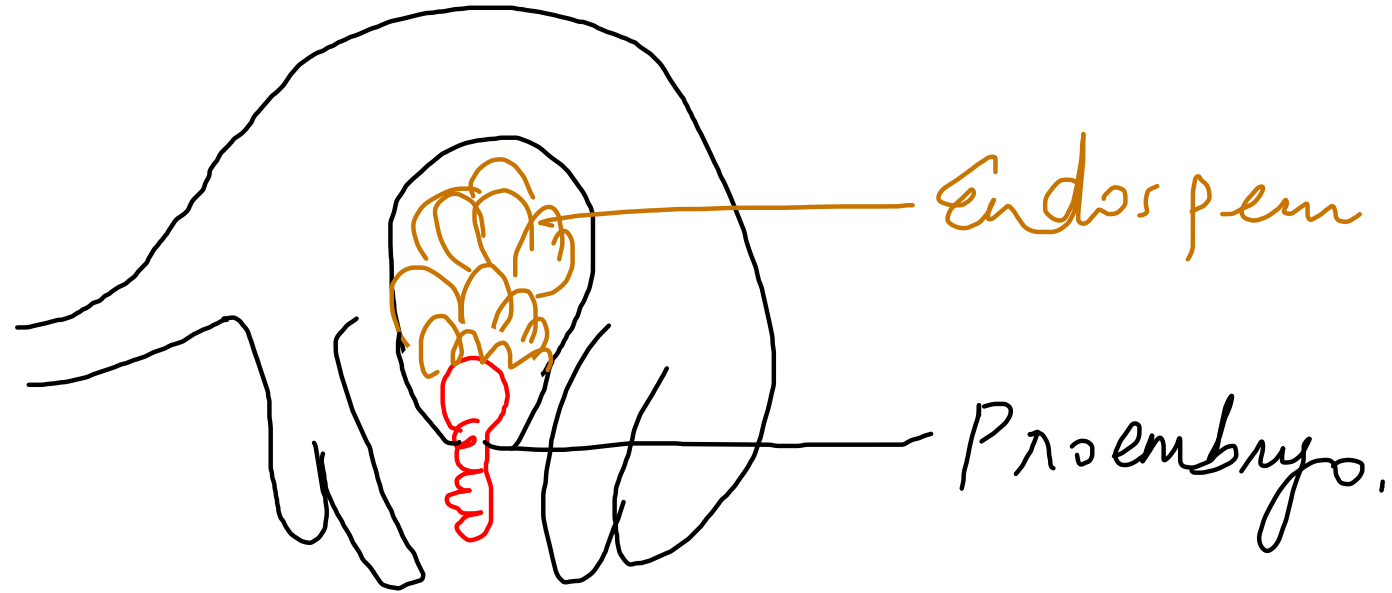
Dev. in all planes.

Hypophysis

Suspensor

Haustorial cell

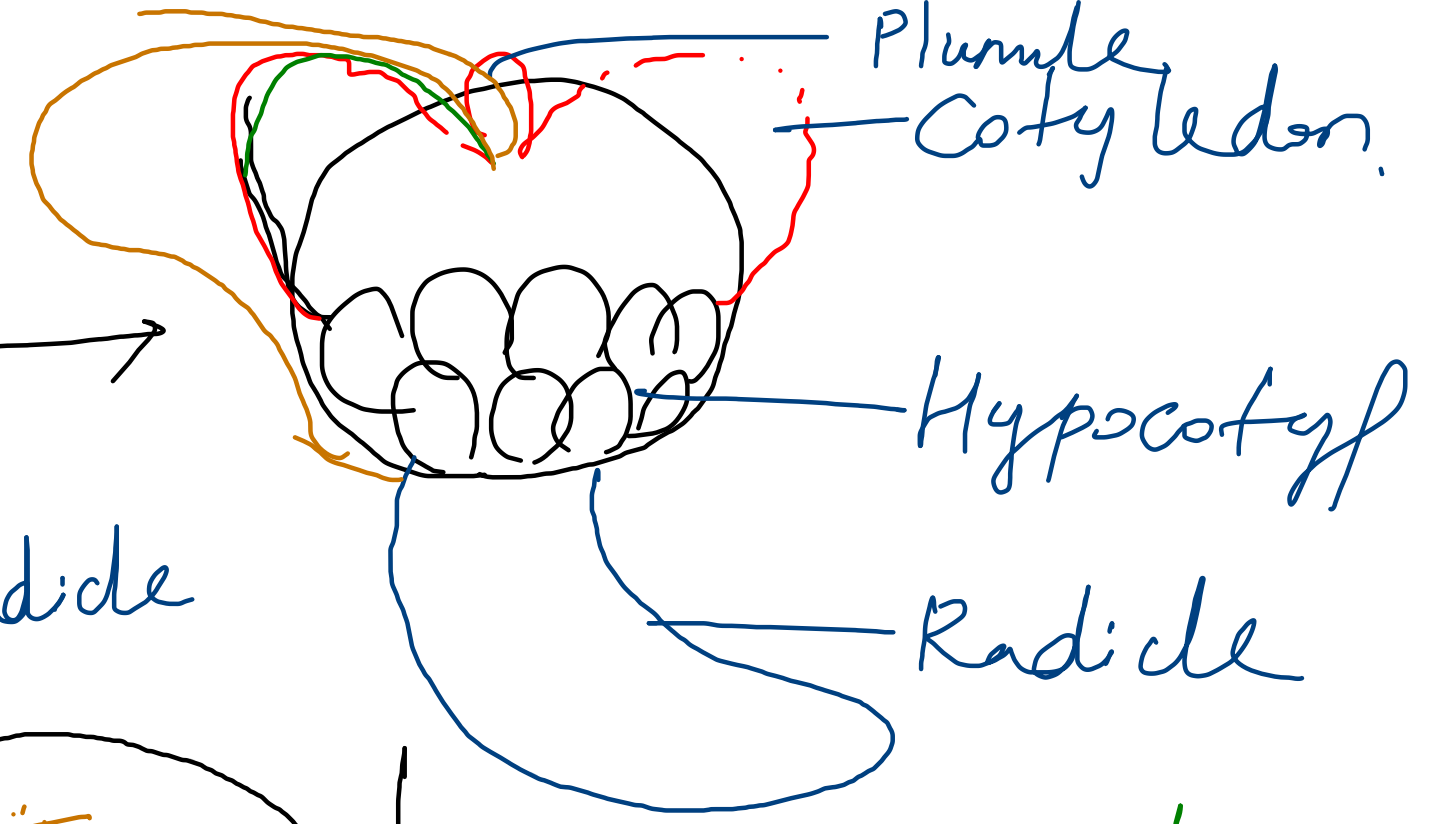
Fⁿ of suspension :- To push the embryo in to the nutritive tissue of endosperm.



:- Shapes of embryo changes during the dev. of dicot embryo :- Globular shaped \rightarrow Heart shaped \rightarrow Horse shoe shaped.



Radicle



Plumule
Cotyledon.

Hypocotyl

Radicle



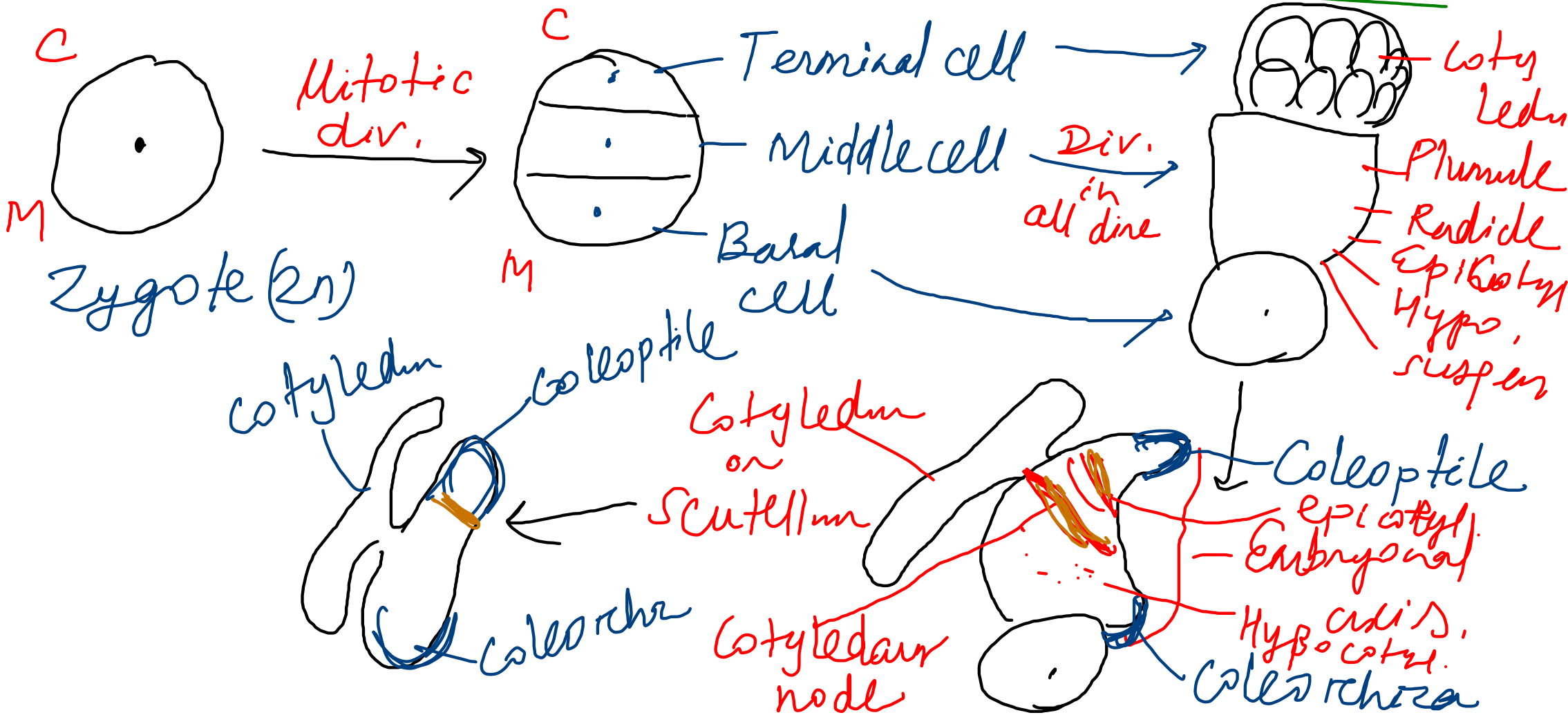
Cotyledons.
bend to
one side.

Heart shaped
embryo.
Horseshoe
shaped.

Heart shaped
embryo.



Development of monocot embryo: →



YYRR ○

Yellow, round

x

yyrr — P₁

Green wrinkled.



YR

Yr

yR yr
1:1:1:1

YyRr — F₁

$YyRr \times YyRr$ (self cross)

	YR	Yr	yR	yr
YR	YYRR Yell, Round	YYRr Yell, Round	YyRR Yell, Round	YyRr Yell, Round
Yr	YYRr Yell, Round	YYrr Yell, Wrinkled	YyRr Yell, Round	Yyrr Yell, Wrinkled
yR	YyRR Yell, Round	YyRr Yell, Round	yyRR Green, Round	yyRr Green, Round
yr	YyRr Yell, Round	Yyrr Yell, Wrinkled	yyRr Green, Round	yyrr Green, Wrinkled

Yellow round:
 Yellow wrinkled:
 Green round:
 Green wrinkled

$F_2 = 9:3:3:1$

Genotypic ratio :-

Yellow round

YY RR \longrightarrow 1

YY Rr \longrightarrow 2

Yy RR \longrightarrow 2

Yy Rr \longrightarrow 4

Yw

YYrr - 1

Yyrr - 2

GR

yyrr - 1

GR

yyRR 1

yyRr 2

Phenotypic ratio :- 9 : 3 : 3 : 1

Exception to law of Dominance:

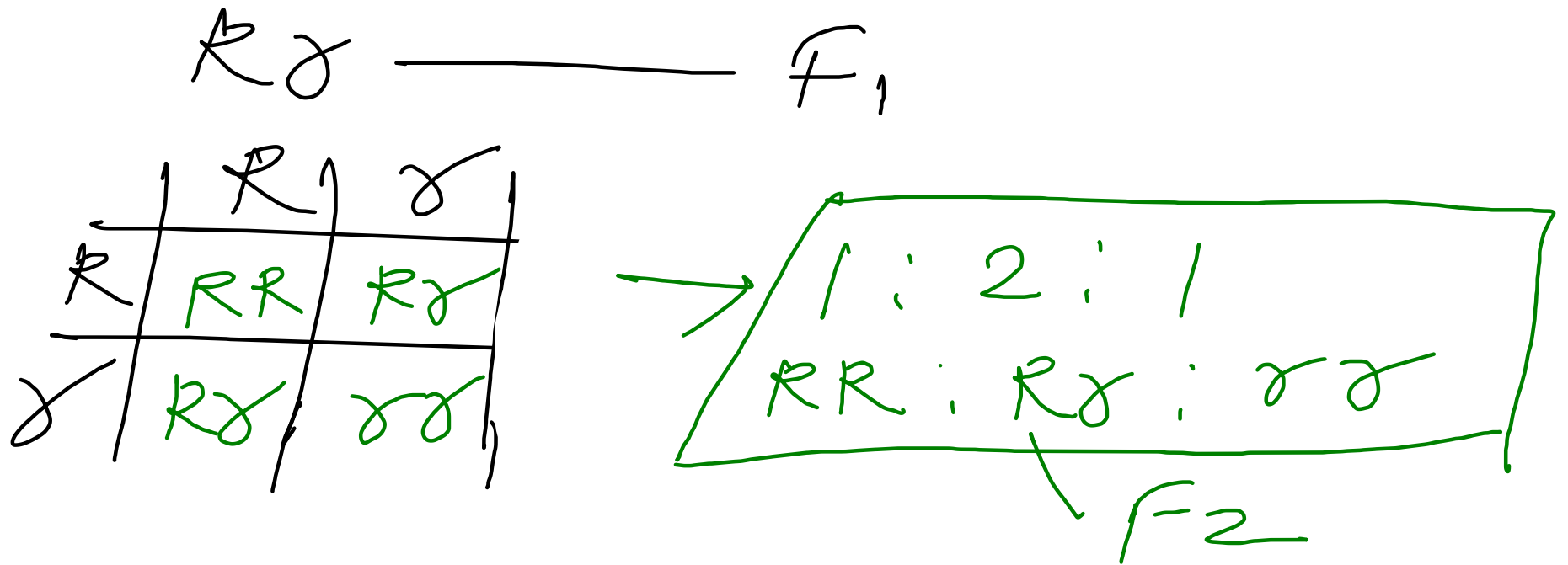
(1) Incomplete Dominance or blended inheritance:

Cotterrell performed a cross in four o'clock plant (Mirabilis jalapa) betⁿ red and white

coloured plants.

→ Incomplete dominance occur when a dominant allele doesn't completely mask the effects of a recessive allele and the organism's resulting physical

→ The F_1 hybrid (pink coloured flower) is the blended version of both the coloured flowers.

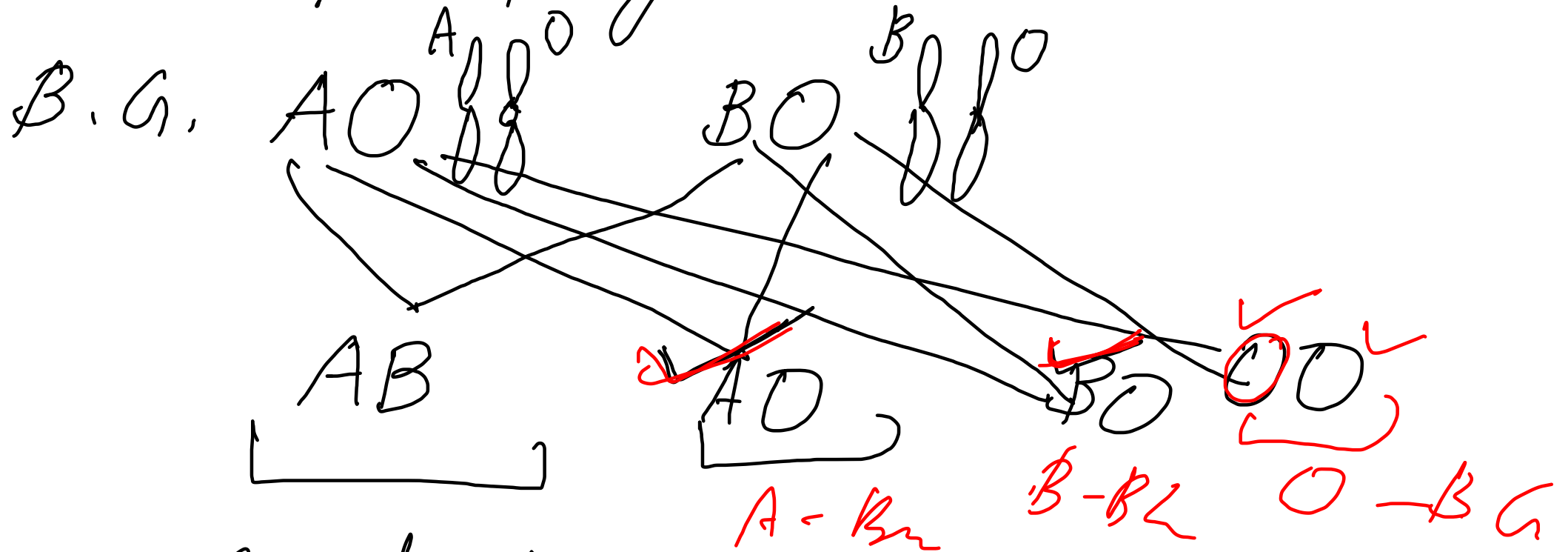


(2) CO-DOMINANCE \Rightarrow

It is the condition in which the function of two alleles are independent to each other.

eg. spotted cows and flowers with petals of two different colour.

eg. Blood grouping in humans.



Co-dominance

These are 3 alleles - A, B, O

→ The allele 'O' doesn't code for any protein (antigen) while

alleles A and B code for antigens.

