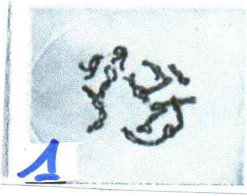

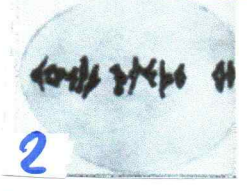
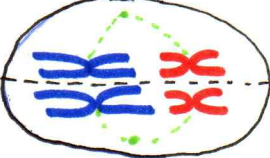
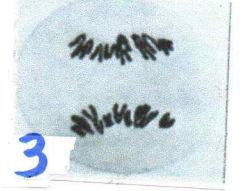
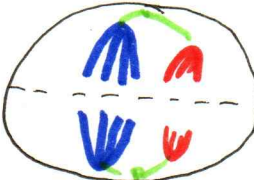
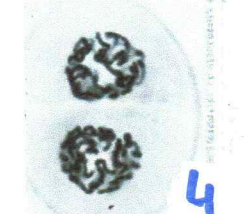
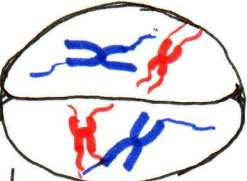

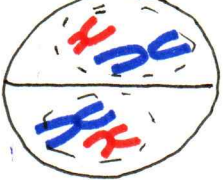

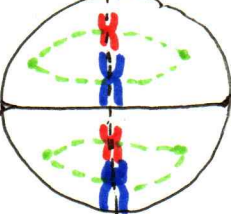
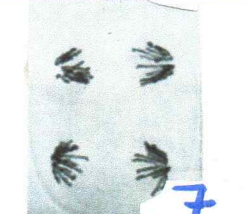
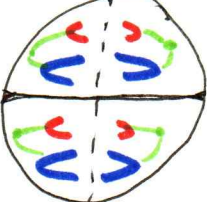
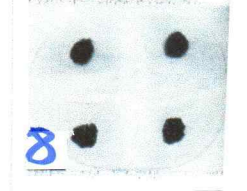
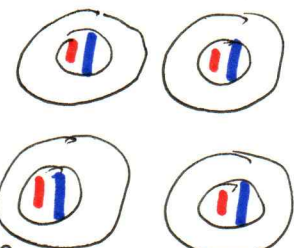


# TABLEAU DES PHASES DE MEIOSE

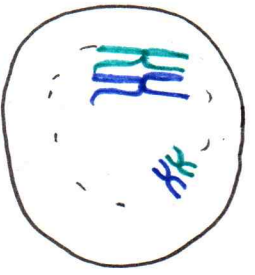
DIVISION REDUCTIONNELLE

DIVISION EQUATIONNELLE

PHASE	PHOTOGRAPHIE	SCHEMA	EVENEMENT
PROPHASE 1		 $2n=4$ double	<ul style="list-style-type: none"> <li>• Condensation des <math>X</math></li> <li>• Rupture de l'enveloppe nucléaire</li> <li>• Mise en place du fuseau méiotique</li> </ul>
METAPHASE 1			<ul style="list-style-type: none"> <li>• Alignement des <math>X</math> homologues sur le plan équatorial (1 homologue de chaque côté)</li> </ul>
ANAPHASE 1			<ul style="list-style-type: none"> <li>• Migration des <math>X</math> homologues</li> </ul>
TELOPHASE 1		 $n=2$ double	<ul style="list-style-type: none"> <li>• Décondensation (brève) des <math>X</math></li> </ul>
PROPHASE 2			<ul style="list-style-type: none"> <li>• Recondensation (brève) des <math>X</math></li> <li>• Mise en place du fuseau méiotique</li> </ul>
METAPHASE 2			<ul style="list-style-type: none"> <li>• Alignement des <math>X</math> sur le plan équatorial (1 chromatide de chaque côté)</li> </ul>
ANAPHASE 2			<ul style="list-style-type: none"> <li>• Migration des chromatides</li> </ul>
TELOPHASE 2		 $n=2$ simples	<ul style="list-style-type: none"> <li>• Obtention de 4 gamètes</li> </ul>

## PREMIÈRE DIVISION DE MÉIOSE : DIVISION REDUCTIVE

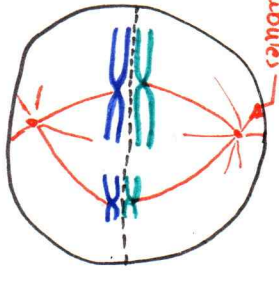
- Passage de  $2n$  chromosomes doubles à  $n$  chromosomes doubles
- Séparation des chromosomes homologues de chaque paire.



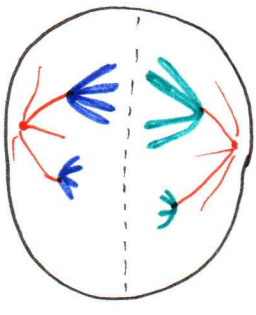
$2n=4$

microtubules

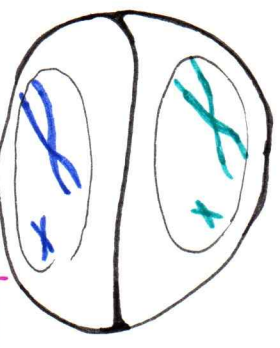
- ### PROPHASE I
- ▶ Condensation des chromosomes
  - ▶ Appariement des chromosomes homologues
  - ▶ Disparition de l'enveloppe du noyau



- ### METAPHASE I
- ▶ Alignement des chromosomes sur le plan équatorial
  - ▶ Accrochage des microtubules



- ### ANAPHASE I
- ▶ Séparation des homologues et migration aux pôles de la cellule

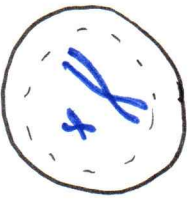


$n=2$  pour chaque cellule

- ### TELOPHASE I
- ▶ Obtention de 2 cellules à  $n=2$  avec des chromosomes doubles (à 2 chromatides)

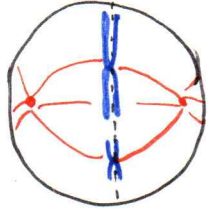
## DEUXIÈME DIVISION DE MÉIOSE : DIVISION ÉQUATIONNELLE

- ▶ Passage de  $n$  chromosomes doubles à  $n$  chromosomes simples
- ▶ Séparation des chromatides

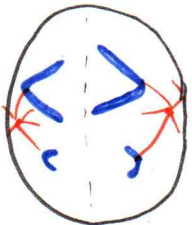


$n=2$

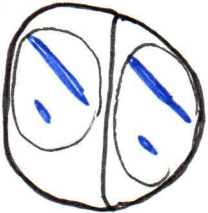
- ### PROPHASE II
- ▶ Rupture de l'enveloppe du noyau



- ### METAPHASE II
- ▶ Alignement des chromosomes sur le plan équatorial : un chromatide de chaque côté
  - ▶ Accrochage des microtubules



- ### ANAPHASE II
- ▶ Migration des chromatides aux pôles de la cellule



$n=2$

- ### TELOPHASE II
- ▶ Obtention de 4 cellules à  $n=2$  avec des chromosomes simples (à 1 chromatide)
  - (Seules 2 cellules ici, car seule 1 des 2 cellules issues de la télophase I est représentée)



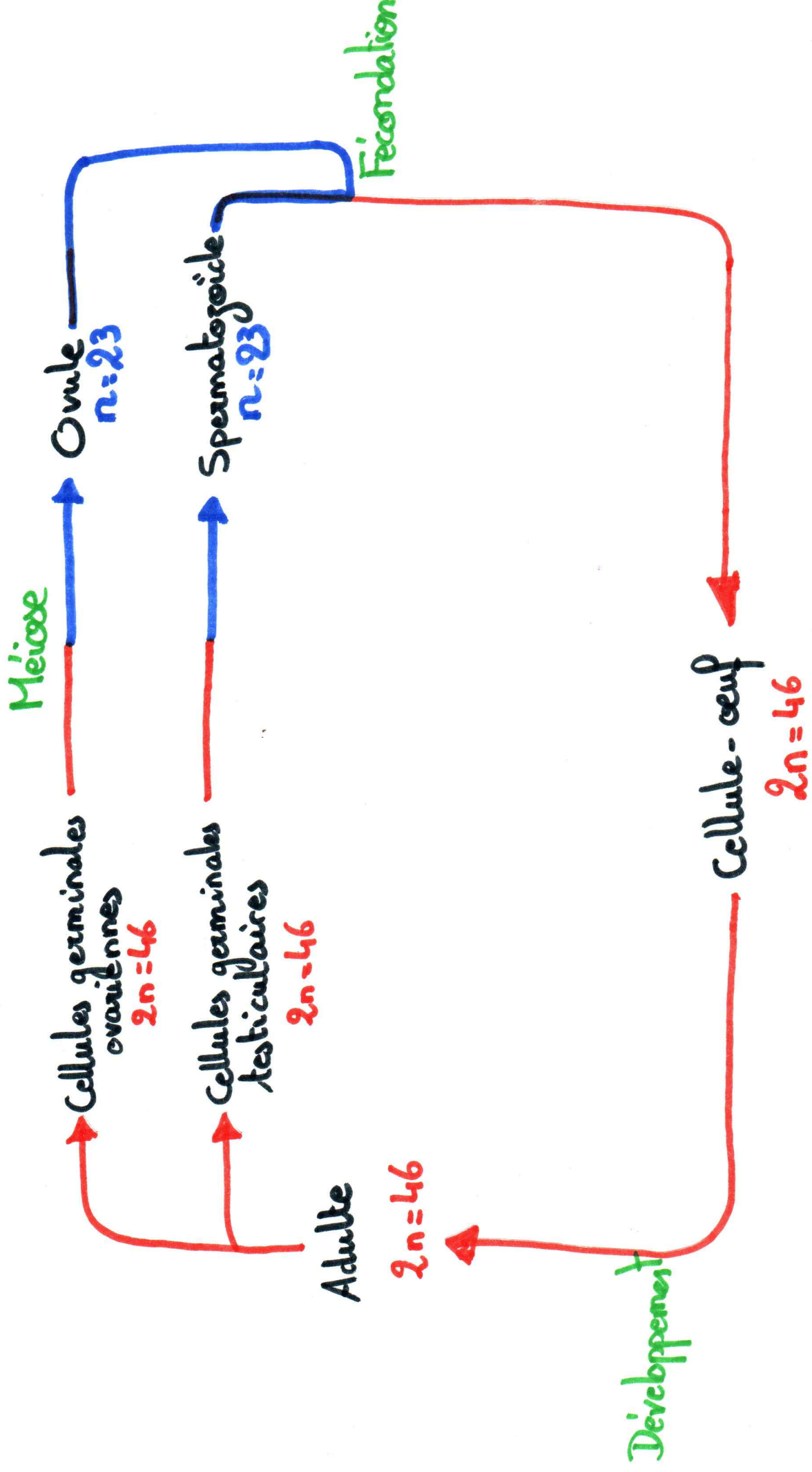


Schéma du cycle de vie humain

- Phases diploïdes
- Phases haploïdes