

Name: _____

Date: _____

Reproduction & Menstrual Cycle

Use the image as well as textbook pages 143-148 to help you answer the following questions:

1. How long does the menstrual cycle in the illustration last?

28 days

2. On a 28 day cycle, which day does ovulation occur?

Day 14

3. If the cycle were to last 33 days, when would ovulation occur?

16-17th day

4. A) What is the follicle's function?

Contains cells which will help mature the oocyte

- B) What is estrogen's function?

Increase in estrogen will increase LH which will trigger ovulation

- C) What is the relationship between the size of the follicle and the amount of estrogen?
As the follicle begins to mature it secretes estrogen, the larger the follicle gets, the more estrogen is secreted.

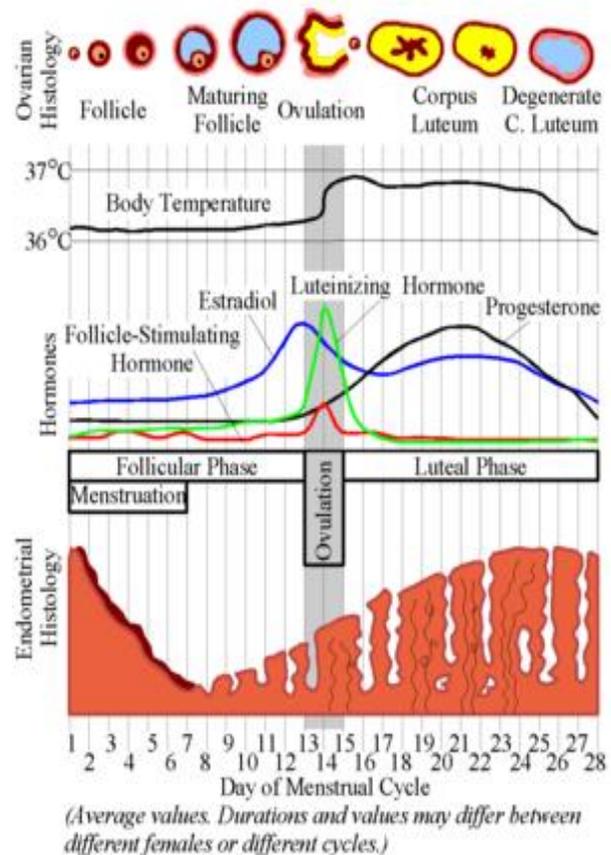
- D) What causes the follicle to grow? The secretion of FSH

5. What is the relationship between the thickness of the uterine lining and the amount of estrogen?
Increased levels of estrogen begins to thicken the lining of the uterus to prepare for implantation

6. A) What is FSH's function? Causes maturation of follicle

- B) What causes FSH to be secreted? Puberty

- C) Why does FSH production drop once the follicle bursts? FSH matures the follicle, once the follicle bursts and egg is released, FSH production is stopped to prevent maturing another egg in case fertilization occurs.



7. What is LH's function? **Triggers ovulation**
8. What gland secretes FSH and LH? **pituitary**
9. A) What is progesterone's function? **To thicken the uterine lining**
B) What causes progesterone to be secreted? **Once ovulation occurs, corpus luteum (remainder of follicle) secretes progesterone to thicken lining and prepare for implantation**
10. Why does ovulation occur? **To release the ovum so it can be fertilized**
11. Once ovulation occurs what will occur 14 days later? **If fertilized, egg implants, if unfertilized, menstruation occurs.**
12. A) During post-ovulation, what hormone is responsible for the thickening of the uterine lining? **progesterone**
B) What hormone was responsible during pre-ovulation? **estrogen**
13. A) What is the corpus luteum? **Remainder of follicle once it has burst**
B) What is its function? **To secrete progesterone to thicken endometrium and to secrete LH to repair ovary**
C) Why does the corpus luteum deteriorate? **If egg is unfertilized then there is no need for progesterone to be secreted and it will disintegrate**
14. Why does a female get her period? **Ovum is unfertilized so she sheds the endometrium lining which is full of blood vessels and so she discards the lining and the unfertilized egg.**

15. Match each hormone to its secretor.

Hormone	Secretor
a) FSH	1. Pituitary gland
b) Estrogen	2. Corpus luteum
c) LH	3. Testicle
d) Progesterone	4. Ovarian follicle
e) Testosterone	5. Pituitary gland

16. Circle the answer corresponding to the number of ova produced from a single oocyte during oogenesis.

- a) 1** **b) 2** **c) 4** **d) 8**

17. Use the following terms to complete the sentences of the text about one of the stages of development during the reproductive system.

birth embryo haploid fuse fetus fertilization sexual

Fertilization occurs when an ovum and sperm, two haploid cells, meet and fuse. This stage of sexual reproduction produces a zygote that develops into an embryo, then a fetus, which will grow until birth.

18. Rewrite the menstrual cycle steps in chronological order. Next to each step, write the reason why this step occurred.

• Step
FSH and LH are both secreted puberty begins
The pituitary secretes FSH
Follicle Develops
Estrogen is secreted
Endometrium begins to develop
LH is secreted
Ovulation occurs
Corpus luteum is formed
Corpus luteum secretes progesterone
Endometrium begins to develop faster
Ovum was not fertilized
Corpus luteum deteriorates
Progesterone levels decrease
Endometrium sheds
Period

19. a) When is oogenesis started? **3-7 months in utero**
 b) When is oogenesis completed so that a secondary oocyte is produced? **Each month from puberty to menopause**

20. What hormone is responsible for the following phenomena:
- Maturation of the follicle during pre-ovulatory phase: **FSH**
 - Thickening of uterine lining during menstrual cycle: **Estrogen**
 - Ovulation, or the rupturing of the follicle causing release of the egg: **LH**

21. True or false:

- At birth, girls contain all the oocytes they will ever have **T**
- Oogenesis starts at puberty **F**
- Females can produce eggs until they die **F**
- If a female gets pregnant, progesterone levels decrease **F**
- LH stimulates the maturation of follicles **F**

22. Several changes take place during puberty. Give of few examples of:

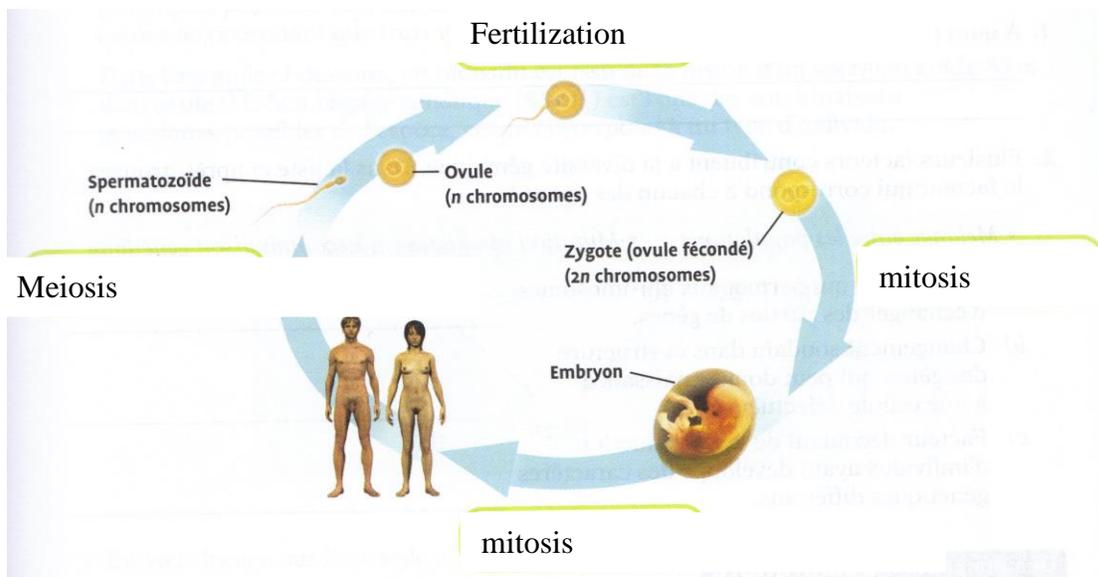
- anatomical changes: **change silhouette body (bones-muscles) hair**
 - psychological changes: **autonomy, libido behavior**
 - Physiological changes: **external and internal organs mature, ability to procreate**
23. When does puberty take place in humans? **10-14**

24. Name the glands that produce the following hormones:

- FSH and LH **Pituitary**
- Testosterone in males **testes**
- Estrogen and progesterone in females **ovaries**

25. Label the diagram below using the following word bank:

- Fertilization - Meiosis -Mitosis (2x)



26. What is the process whereby sperm are manufactured in the testes?
spermatogenesis