

## Mitosis vs. Meiosis

1. A cell with 24 chromosomes undergoes meiosis, the sex cells produced will each have \_\_\_\_\_ chromosomes.  
a. 6      **b. 12**      c. 24      d. 48
2. The chromosome number in cells after mitosis is \_\_\_\_\_ the parent chromosome number.  
**a. the same as**      b. half      c. twice      d. four times
3. Meiosis produces \_\_\_\_\_.  
a) cells with the diploid chromosome number (2n) No, haploid (n)  
b) cells with identical chromosomes No, there is re-combination  
**c) sex cells** ✓  
d) a zygote No, this is the meeting of 2 gametes (Fertilization)
4. In the cell cycle, most of the life of any cell is spent in \_\_\_\_\_.  
a. metaphase      b. anaphase      c. telophase      **d. interphase** Normal cell metabolism
5. Chromosomes are doubled during \_\_\_\_\_.  
**a. interphase**      b. prophase      c. metaphase      d. anaphase
6. During \_\_\_\_\_ in mitosis, double-stranded chromosomes separate and go to opposite ends of the cell.  
a. Interphase      b. metaphase      c. prophase      **d. anaphase** "a" → "apart"
7. During \_\_\_\_\_ stage in mitosis, the nuclear membrane disappears.  
a. interphase      b. metaphase      **c. prophase**      d. anaphase
8. At the end of meiosis, how many haploid cells have been formed from the original cell?  
a. one      b. two      c. three      **d. four**

What is the process for making a zygote? What does the zygote become?

A zygote is the combining of male & female haploid gametes [or the fertilization and fusion/combination of an ovum by a spermatozoan]

Zygote → embryo → fetus → etc...