

MEIOSIS ANALYSIS QUESTIONS

1. How many chromosomes does a normal diploid (or somatic cell) of this organism have? Why does the cell in interphase have double that amount?
2. What are homologous chromosomes? How many pairs of homologous chromosomes are there in your cells during prophase I?
3. What happens to the chromosomes in metaphase I? What do we call these now (look in your notes for help if you are stuck...)?
4. What is different in the way the chromosomes line up in meiosis metaphase I when compared to MITOSIS metaphase?
5. In a stained chromosome, what do the colored bands represent?
6. During what phase does crossing over take place? How does this process increase genetic variation?
7. What connects the pairs of chromosomes into the tetrads that they form?
8. During anaphase I, are the chromosomes pulled to the poles in duplicated sets, or individually?
9. How many daughter cells are formed after the first division of meiosis? Are these cells identical or different?
10. How do the cells line up in metaphase II? How does this differ from the way they lined up in metaphase I?
11. During anaphase II, are the chromosomes pulled to the poles in duplicated sets, or individually?
12. How many cells result from the second division of meiosis? Are these unique or the same? Why?
13. Below is an enlarged picture of crossing over. Describe this process in your own words by looking at the picture. _

