Meiosis Pre-Test

1. In humans, a diploid zygote is formed during fertilization. **(True)**

2. Meiosis is a form of cell division that halves the number of chromosomes when forming specialized reproductive cells such as gametes and spores. **True**

3. Meiosis occurs in organisms that undergo both asexual and sexual reproduction. **False (sexual only)**

4. During independent assortment, offspring receive 23 homologous chromosomes from both the male and female in a nonrandom fashion. **False (random)**

5. There are 64 trillion possible outcomes during fertilization. **True (2^23 (independent assortment) * 2^23 (crossing over) =64**

6. During asexual reproduction, offspring are identical to their parent. **(True)**

7. An advantage of sexual reproduction is creating diversity and adaptation for different environments. **(True)**

8. Meiosis in males is oogensis **(False)**

9. Meiosis in females is spermatogenesis. **(False)**

10. Meiosis in males results in 4 haploid sperm. **(True)**

11. Meiosis in females results in 2 functional haploid egg cell. **(False; 1)**

12. Compare and contrast mitosis and meiosis.

13. Define monozygotic

14. Define dizygotic

15. Do all cells divide?

(Info from Deborah Allen)

WHEN TWINS MARRY TWINS
TOPICS INTRODUCED BY THE PROBLEM

Basic Background Topics
(Your textbook can be consulted for information on these)

- Types of cell division and how they work
- Mechanisms for introducing genetic variation and how they work

Additional Topics
The Internet can be a resource if you're interest in checking out:

- Role of "nature versus nuture" in determining an organism's phenotype (observable expression of genotype)
- Twins

ADDITIONAL ELECTRONIC RESOURCES FOR RESEARCHING TWINS

Berkowitz, A. (September, 1996) Our genes, ourselves? (Article from BioScience Vol. 46:42-51,1996; posted with permission). Serendip. <http://serendip.brynmawr.edu/gen_beh/Berkowitz.html>.

Gilbert, S. F. (April, 2003) Non-identical monozygotic twins. Chapter 11 DevBio Online http://www.devbio.com/article.php?ch=11&id=111.