BILL-MODELING MITOSIS & MEIOSIS  
Use 2 pages that face each other to diagram the following:  
DRAW PICTURES FOR THE FOLLOWING PHASES.   
Show a cell with 4 chromosomes. Color homologous chromosomes 2 different colors.   
  
  
MITOSIS PROPHASE PROPHASE I of MEIOSIS

MITOSIS METAPHASE METAPHASE I of MEIOSIS

MITOSIS ANAPHASE

ANAPHASE I of MEIOSIS ANAPHASE II of MEIOSIS

QUESTIONS

MITOSIS  
  
1. Why does DNA switch between CHROMOSOME and CHROMATIN forms?

2. At the end of interphase of mitosis, sister chromatids are   
  
 IDENTICAL SIMILAR BUT NOT IDENTICAL

3. At the end of interphase of mitosis, homologous chromosomes are   
  
 IDENTICAL SIMILAR BUT NOT IDENTICAL  
  
3. After prophase, sister chromatids are   
  
 IDENTICAL SIMILAR BUT NOT IDENTICAL

MEIOSIS

1. MEIOSIS is called REDUCTION DIVISION. When is the chromosome number cut in half?

MEIOSIS I MEIOSIS II

3. At the end of interphase, sister chromatids are   
  
 IDENTICAL SIMILAR BUT NOT IDENTICAL  
  
4. After prophase I, sister chromatids are   
  
 IDENTICAL SIMILAR BUT NOT IDENTICAL

5. What happens if a homologous pair of chromosomes fails to separate, and how might this   
contribute to genetic disorders such as Down syndrome, Turner syndrome, or   
Klinefelter syndrome?