Meiosis Worksheet Answer Key

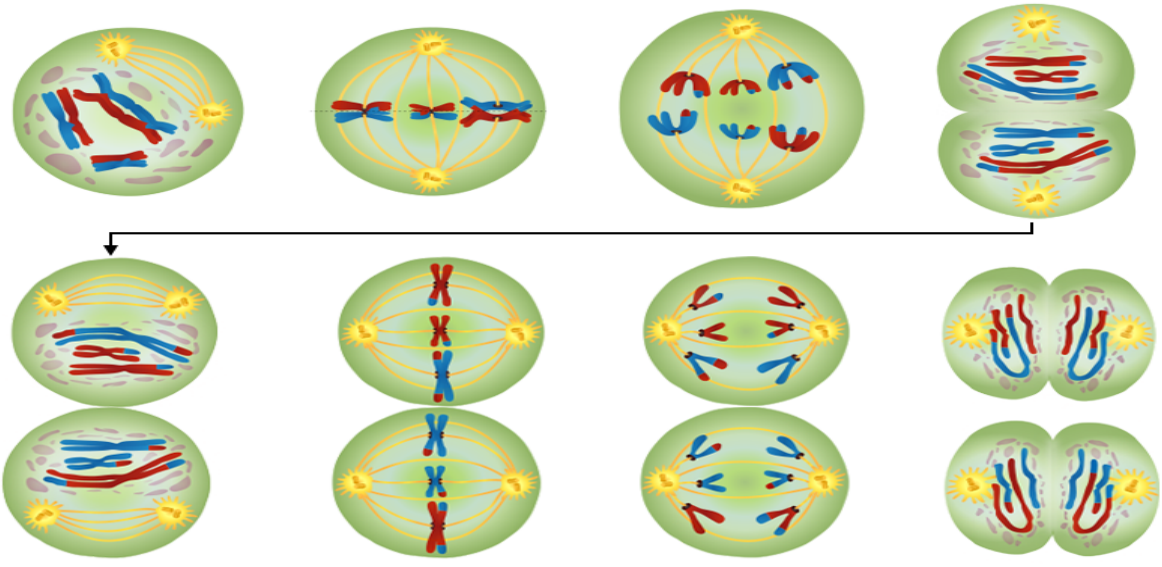
1. A cell with two pairs of each set of chromosomes is called a [**diploid** / haploid] cell.
   These cells are typically found throughout the body tissues and are called [germ / **somatic**] cells.

2. A cell with only one set of chromosomes is called [diploid / **haploid**] cell.
   These types of cells are found in the reproductive organs and are called [**germ** / somatic] cells.

3. Sperm and egg cells are called [**gametes** / zygotes]. A fertilized egg is a [gamete / **zygote**].
4. A type of cell division that results in diploid cells: [meiosis / **mitosis**]
5. A type of cell division that results in haploid cells. [**meiosis** / mitosis]

6. When a sperm and egg combine, it is called _____**fertilization**_____
7. What is the diploid number for humans? __**46**___ What is the haploid number? __**23**___
8. Matching chromosomes are called _____**homologous**_____ pairs.
9. During prophase I of meiosis, these pairs form a tetrad in a process called ____**synapsis**____.
10. When homologous chromosomes exchange genes, it is called: _____**crossing-over**_____.
11. How many daughter cells are created at the end of meiosis I? __**2**___ meiosis II? __**4**___
12. During meiosis, chromosomes will split into daughter cells randomly, making each gamete unique. This is called _____**independent assortment**_____.
13. The process by which sperm are made is called _____**spermatogenesis**_____.
14. The process by which eggs are made is called _____**oogenesis**_____.
15. During the creation of an oocyte, 3 additional haploid cells are created that will not be fertilized, these cells are called _____**polar bodies**_____.
16. A fertilized egg is called a _____**zygote**_____.

17. Label the Phases

Prophase 1	**Metaphase 1**	**Anaphase 1**	**Telophase 1**
			
Prophase 2	**Metaphase 2**	**Anaphase 2**	**Telophase 2**

18. Indicate whether the characteristic applies to mitosis, meiosis, or both, by checking the box.

	Mitosis	Meiosis
Pairing of homologous chromosomes occur		X
Two divisions		X
Two daughter cells produced	X	
Chromosome number is halved		X
Involves duplication of chromosomes	X	
Crossing over occurs		X
Associated with growth and asexual reproduction	X	
Associated with sexual reproduction		X
Produces gametes		X
Associated with cancer	X	
Produces identical daughter cells	X	
Recombination occurs		X
Occurs in plants and animals	X	X
Four daughter cells are produced		X

19. What are the key events in Meiosis I?

Homologous pairs join and exchange DNA during crossing over, 2 daughter cells are created.

Name:_____ Date:_____

Meiosis Worksheet

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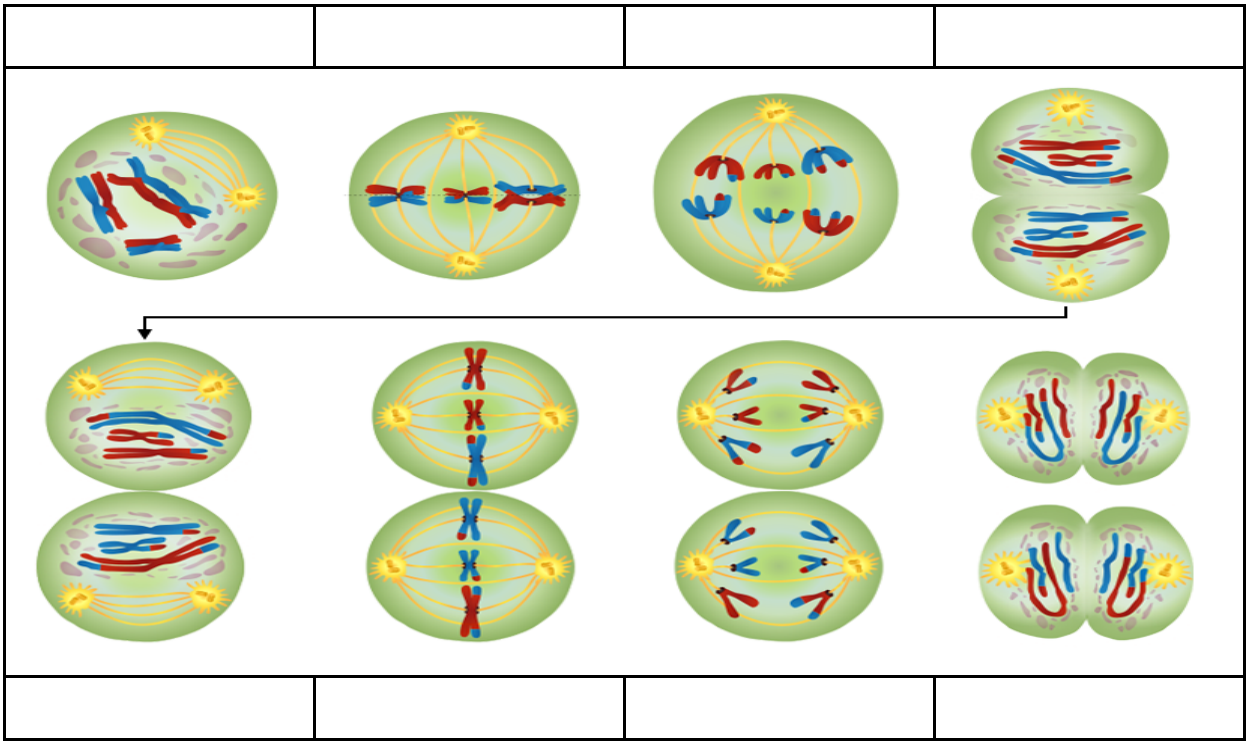
4. A type of cell division that results in diploid cells: [meiosis / mitosis]
5. A type of cell division that results in haploid cells. [meiosis / mitosis]

6. When a sperm and egg combine, it is called _____
7. What is the diploid number for humans? _____ What is the haploid number? _____
8. Matching chromosomes are called _____ pairs.
9. During prophase I of meiosis, these pairs form a tetrad in a process called _____.
10. When homologous chromosomes exchange genes, it is called: _____.
11. How many daughter cells are created at the end of meiosis I? _____ meiosis II? _____
12. During meiosis, chromosomes will split into daughter cells randomly, making each gamete unique. This is called _____.
13. The process by which sperm are made is called _____.
14. The process by which eggs are made is called _____.
15. During the creation of an oocyte, 3 additional haploid cells are created that will not be fertilized, these cells are called _____
16. A fertilized egg is called a _____.

17. Label the Phases



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