

EOR 6 (chapter 9B)

Name \_\_\_\_\_



**DIRECTIONS:** Read sections **9.11 → 9.23 (SKIP 9.17 → 9.19)** in the textbook and answer the following questions:

1) Define **Incomplete Dominance** patterns of inheritance and then explain an **example** of a trait determined by Incomplete Dominance in flowers and humans with both **sentences** and **diagrams**. (see Figure 9.11A & 9.11B)

**Incomplete Dominance =**

An Example of <b>ID</b> in <u>flowers</u> is:	Diagram:
An Example of <b>ID</b> in <u>humans</u> is:	Diagram

2) Human blood type is a trait that is determined by **multiple alleles**. (i.e., The human “gene pool” for blood types contains more than 2 possible alleles that any given human could inherit.) List the **3** different alleles that determine human blood types :

<b>3 Blood Type ALLELES</b>			
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3) Summarize in the TABLE below all the different human blood type **genotypes** and **phenotypes**.

<b>Genotypes:</b>				
<b>Phenotypes:</b>				

4) If a man with **B** blood has a child with a woman with **AB** blood, what is the chance the child will have O blood...Explain?

5) Would you rather be homozygous or heterozygous for the sickle-cell mutation ..... Explain WHY?

6) Has the tropical disease malaria helped the sickle-cell mutation become more or less common in the gene pool for persons living in Africa ..... explain WHY?


7) Explain why two identical twins with the exact same skin tone **genotype** might have different skin tone **phenotypes**?

8) Define a **Sex-linked** trait and explain the symptoms for **3** different human sex-linked disorders.

**Sex-linked** trait is:

Sex-linked disorder	Symptoms
1	
2	
3	

**Directions:** Review the assigned heredity reading by indicating whether each Heredity statement below is **T/F** and the **textbook page** where the answer can be found.

	 <b>Heredity Statements (Chapter 9B)</b>	After reading <b>T/F</b>	Textbook page
<b>1</b>	The gender of a baby chicken is determined by which sex chromosome the <b>hen</b> puts in the egg.		
<b>2</b>	Men have a higher rate of Sickle-cell Anemia than women		
<b>3</b>	It is NOT possible for a woman to be colorblind		
<b>4</b>	Persons <u>heterozygous</u> for hypercholesterolemia have about the SAME levels of blood cholesterol as persons who are <u>homozygous</u> for hypercholesterolemia		
<b>5</b>	It is NOT possible for a man to be a healthy hemophilia carrier		
<b>6</b>	When pink snapdragon plants are crossed with pink, the next generation will have red, white, and pink flowers in equal 1/3 ratios.		
<b>7</b>	It is safe to give a transfusion of O blood to a person with B blood.		
<b>8</b>	After a malaria infection, African American men are immune from inheriting the Sickle-cell mutation.		
<b>9</b>	Sickle-cell Anemia can be cured with a series of blood transfusions		
<b>10</b>	If a man has Duchenne Muscular Dystrophy (DMD), he CANNOT give it to his sons.		