

# Conceptual Biology

## Chapter 6: Inheritance

### *Dominant and Recessive Traits*

1. Some small woodland creatures have either spots or stripes. Fur pattern is determined by a single gene. The striped phenotype is **dominant** and the spotted phenotype is **recessive**.

Both the woodland creatures shown below are **homozygotes**.



Genotype is	[aa] [AA]	[aa] [AA].
Phenotype is	[spotted] [striped]	[spotted] [striped].

2. The woodland creature below is a **heterozygote**. Does it have spots or stripes?  
Sketch the woodland creature's fur pattern and circle the genotype and phenotype.



Genotype is	[aa] [AA] [Aa].	
Phenotype is	[spotted] [striped].	

*Fill in the blanks:*

3. Here are two more woodland creatures. Which of the following must be a **homozygote**?  
Which could be either a **homozygote** or a **heterozygote**?



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So we see that the spotted one must be a [homozygote] [heterozygote],  
since you have to have two recessive alleles to have spots. The striped one is  
[a homozygote] [a heterozygote] [either a homozygote or heterozygote].