ASEXUAL REPRODUCTION IN SMILEY FACES

The species of smiley faces that live on Gibbs Island have the ability to reproduce sexually when conditions are unfavorable and asexually when conditions are favorable. Theses smiley faces like to live in warm conditions, and the weather recently has been sunny and warm. There has also been an abundance of food on the island. As a result the smiley faces have begun to reproduce asexually.

1. One of the smiley faces that reproduced asexually had the genotype shown in the table below. Use the Smiley Face Traits Key to figure out this smiley face's phenotype and write it down in the chart below.

Genotype	Phenotype
Cc	
hh	
vV	
RR	
RW	
dd	
EE	
Nn	
pP	
Tt	
Ff	
ll	
BB	

2. Use the information from question 1 and the Smiley Face Traits Key to create your smiley face.

3. This smiley face continues to reproduce asexually because of its environmental conditions. Draw what two of the offspring will look like.

Like all organisms, smiley faces have some traits that are beneficial to the species, some that are harmful, and some that are neither good nor bad. Use the following chart to help you answer questions 4 and 5.

Trait	Description
Ear Color	Blue ears blend in well with the environment
Face Shape	Oval faces cannot roll as fast as round faces
Face Color	Smiley Faces with green faces can better blend in with the environment
Smile	Smiley faces use their teeth to protect themselves from predators. Mouths with thin smiles cannot hold as many teeth as mouths with thick smiles.
Eye Shape	5 point star eyed smiley faces have better eye sight than 4 point star eyed Smiley Faces

4. If this population of smiley faces continues to reproduce asexually, give two examples of detrimental traits which future generations of this population of smiley faces will inherit.

5. If this population of smiley faces continues to reproduce asexually, give two examples of traits that future generations of this population of smiley faces will inherit that will help them be successful in surviving.