Genetics Practice part 2

Name:

Here is a picture of an alien who displays all of the dominant characteristics of its species. Below is a chart listing the various traits found in this alien species. Use the information in the chart to solve the genetic problems that follow.

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| **TRAIT** | **DOMINANT** | **RECESSIVE** |
| Body color | Yellow (B) | Orange (b)  |
| Number of Antennae | Two (A) | One (a) |
| Eye color | Purple (E) | White (e) |
| Eyesight | Glasses needed (G) | No glasses (g) |
| Number of body rings | Three (R) | Two (r) |

1. A heterozygous yellow male and a homozygous yellow female are having a child. What is the probability of this couple having an orange baby?
2. There is an alien couple who are both hybrid for purple eyes. What is the probability that they will have an alien baby with a homozygous recessive genotype?
3. A male alien with 1 antennae and a female alien who has 2 antennae are starting a family. The female is heterozygous for the antennae trait. What is the chance that the child will look like the father?
4. Draw a picture of the alien offspring with the following alleles.

|  |  |  |
| --- | --- | --- |
| **TRAIT** | **Inherited from Dad** | **Inherited from Mom** |
| Body color | b | b |
| Number of antennae | a | A |
| Eye color | E | e |
| Eyesight | G | g |
| Body rings | r | R |