***Alien Genetics Practice***

Below is a chart listing various traits found in this alien race. Use the information in the chart to solve the genetics problems that follow.

|  |  |  |
| --- | --- | --- |
| Trait | Dominant Phenotype | Recessive Phenotype |
| Body color | **(Y)** Yellow | **(y)** Orange |
| Number of Antennae | **(A)** 2 | **(a)** 1 |
| Eye color | **(P)** Purple | **(p)** White |
| Eyesight | **(E)** Glasses needed | **(e)** Glasses not worn |
| Number of Body Rings | **(R)** 3 | **(r)** 5 |

**1.** A heterozygous male mates with a pure yellow female. What is the chance this couple will produce an orange baby? [Check your answer](javascript:answerWindow(%22http://www.learn4good.com/cms/wp-content/themes/science/genetics_answers_popups/answer.html%22))

**2.** Two purple-eyed aliens mate. Both aliens are hybrid for the eye color trait. What is the chance this couple will produce a baby with a homozygous recessive genotype? [Check your answer](javascript:answerWindow(%22http://www.learn4good.com/cms/wp-content/themes/science/genetics_answers_popups/answer2.html%22))

**3.** A heterozygous female with 3 body rings mates with a 5-ringed male. What is the chance that this couple will have a baby that looks like its mother? [Check your answer](javascript:answerWindow(%22http://www.learn4good.com/cms/wp-content/themes/science/genetics_answers_popups/answer3.html%22))

**4.** A pure male alien displaying the dominant body color mates with a female that is homozygous recessive for this characteristic. What is the chance that this couple will have a baby with a hybrid genotype? [Check your answer](javascript:answerWindow(%22http://www.learn4good.com/cms/wp-content/themes/science/genetics_answers_popups/answer4.html%22))

**5.** A male alien with 1 antenna mates with a female alien who has 2 antennae. The female is heterozygous for the antenna trait. What is the chance that this couple will produce a baby with the recessive phenotype? [Check your answer](javascript:answerWindow(%22http://www.learn4good.com/cms/wp-content/themes/science/genetics_answers_popups/answer5.html%22))

**6.** An alien couple, both of which wear glasses, are having a baby. The male’s genotype is heterozygous. The female is phenotypically dominant but does carry the recessive allele. What is the chance that this couple’s baby will have to wear glasses? [Check your answer](javascript:answerWindow(%22http://www.learn4good.com/cms/wp-content/themes/science/genetics_answers_popups/answer6.html%22))

**7.** A 3-ringed female mates with a homozygous male. The female has been genetically tested and is carrying both the dominant and the recessive allele for this trait. The male displays the recessive phenotype. What is the chance that this couple will have a genetically pure baby? [Check your answer](javascript:answerWindow(%22http://www.learn4good.com/cms/wp-content/themes/science/genetics_answers_popups/answer7.html%22))