

Practice for Chapter 3 Punnett Squares Charting and Predicting Allele Probabilities

Read the examples below:

B= Black dominant b = white recessive

<p>P – Generation (Parental) Crossing BB x bb (Purebred black x purebred white)</p> <div style="text-align: center; margin: 10px 0;"> <table style="margin: auto;"> <tr> <td></td> <td>B</td> <td>B</td> </tr> <tr> <td>b</td> <td style="border: 1px solid black;">Bb</td> <td style="border: 1px solid black;">Bb</td> </tr> <tr> <td>b</td> <td style="border: 1px solid black;">Bb</td> <td style="border: 1px solid black;">Bb</td> </tr> </table> </div> <p>F₁ Generation Offspring (First Filial Generation) 100% of them are black</p>		B	B	b	Bb	Bb	b	Bb	Bb	<p>Crossing Bb x Bb (Hybrid x Hybrid)</p> <div style="text-align: center; margin: 10px 0;"> <table style="margin: auto;"> <tr> <td></td> <td>B</td> <td>b</td> </tr> <tr> <td>B</td> <td style="border: 1px solid black;">BB</td> <td style="border: 1px solid black;">Bb</td> </tr> <tr> <td>b</td> <td style="border: 1px solid black;">Bb</td> <td style="border: 1px solid black;">bb</td> </tr> </table> </div> <p>F₂ Generation Offspring (Second Filial Generation) 75% are black, and 25% are white</p>		B	b	B	BB	Bb	b	Bb	bb
	B	B																	
b	Bb	Bb																	
b	Bb	Bb																	
	B	b																	
B	BB	Bb																	
b	Bb	bb																	

Now you practice crossing some below, such as Bb x bb

	B	b
b		
b		

How many of their 4 offspring are black? _____

What percentage will be black? _____

How many of their 4 offspring are white? _____

What percentage will be white? _____

Cross a purebred normal with a purebred albino cornsnake:

N = normal allele; n = albino recessive allele

(Fill in the boxes of the Punnett Square)

	N	N
n		
n		



How many of the offspring will be normal?

_____ %

How many of the offspring will be albino?

_____ %

How many of the offspring will be purebred?

_____ %

How many of the offspring will be hybrid?

_____ %