

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Biology Review: Dihybrid Crosses

Determine how many combinations of genotypes and phenotypes are present in each of the crosses below.

Allele	Trait	Type
G	Solid gray fur	Dominant
g	Striped gray fur	Recessive
B	Green eyes	Dominant
b	Blue Eyes	Recessive
T	Long tail	Dominant
t	Short tail	Recessive
E	Large ears	Dominant
e	Small ears	Recessive

	<table border="1" style="margin: auto;"> <tr><td></td><td style="text-align: center;">G</td><td style="text-align: center;">g</td></tr> <tr><td style="text-align: center;">G</td><td style="text-align: center;">GG</td><td style="text-align: center;">Gg</td></tr> <tr><td style="text-align: center;">g</td><td style="text-align: center;">Gg</td><td style="text-align: center;">gg</td></tr> </table>		G	g	G	GG	Gg	g	Gg	gg	<table border="1" style="margin: auto;"> <tr><td></td><td style="text-align: center;">B</td><td style="text-align: center;">b</td></tr> <tr><td style="text-align: center;">B</td><td style="text-align: center;">BB</td><td style="text-align: center;">Bb</td></tr> <tr><td style="text-align: center;">b</td><td style="text-align: center;">Bb</td><td style="text-align: center;">bb</td></tr> </table>		B	b	B	BB	Bb	b	Bb	bb	<b>2</b>	<b>2</b>	<b>4</b>
	G	g																					
G	GG	Gg																					
g	Gg	gg																					
	B	b																					
B	BB	Bb																					
b	Bb	bb																					
Ex:	<b>GgBb × GgBb</b>		<b>3</b>	<b>3</b>	<b>9</b>																		

For each of the crosses below, determine how many combinations of genotypes are possible.

#1

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	<b>bbEe × Bbee</b>		_____ × _____ = _____ # of genotypes # of genotypes total combos								

#2

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	<b>GGTt × ggTT</b>		_____ × _____ = _____ # of genotypes # of genotypes total combos								

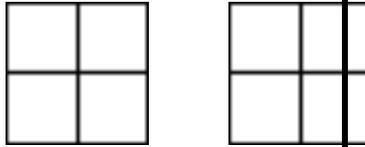
#3

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#4

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	<b>TtBb × TtBb</b>		_____ × _____ = _____ # of genotypes # of genotypes total combos								

#5



**ggBb × GgBB**

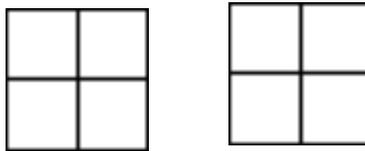
$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of phenotypes    # of phenotypes    total combos

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of genotypes    # of genotypes    total combos

#6



**TtEe × ttEe**

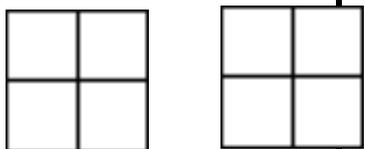
$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of phenotypes    # of phenotypes    total combos

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of genotypes    # of genotypes    total combos

#7



**GGBb × Ggbb**

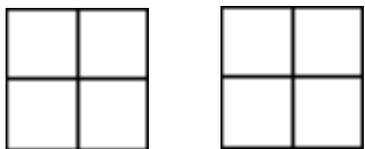
$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of phenotypes    # of phenotypes    total combos

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of genotypes    # of genotypes    total combos

#8



**BbEE × Bbee**

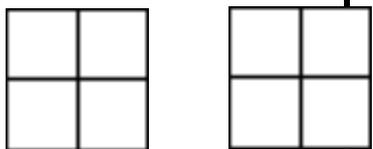
$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of phenotypes    # of phenotypes    total combos

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of genotypes    # of genotypes    total combos

#9



**TtEe × TtEe**

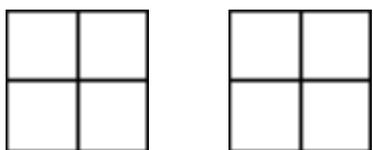
$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of phenotypes    # of phenotypes    total combos

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of genotypes    # of genotypes    total combos

#10



**GgTt × GgTt**

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of phenotypes    # of phenotypes    total combos

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# of genotypes    # of genotypes    total combos