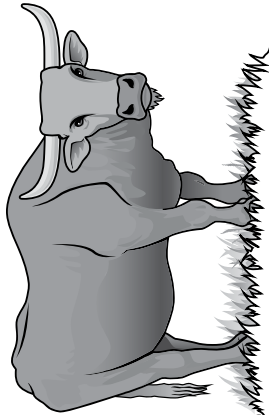


Cattle Call Answer Key

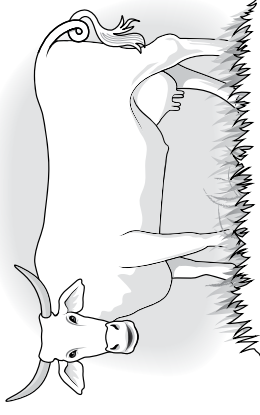


Bull (male)

Hide: Purple (pp)
 Eye: Red (Rg)
 Horn: Long Horns (LL)
 Tail: Straight (Sc)

Cow (female)

Hide: Orange (Op)
 Eye: Red (Rg)
 Horn: Long Horns (LL)
 Tail: Curly (cc)



Directions: As an animal geneticist, predict the traits of a calf produced by a bull and a cow. Using a Punnett square will help you determine what the calf will look like. Use the traits given for the bull to fill in the top of the square and the traits given for the cow to fill in the side. Once the squares are complete, roll a die to represent chance. If you roll a one, select the top left square. If you roll a two, select the top right square. If you roll a three, select the bottom right square. If you roll a four, select the bottom left square. If you roll a five or a six, roll again. Circle the corner of each Punnett square that is selected by chance.

Calf's hide color: Dominant orange or recessive purple

	BULL	p	p
COW	♀	pp	pp
	♀	Op	Op

Probability of orange hide:
 $\frac{2}{4}$ out of $\frac{4}{4}$

Probability of purple hide:
 $\frac{2}{4}$ out of $\frac{4}{4}$

Calf's eye color: Dominant red or recessive green

	BULL	R	g
COW	♀	Rg	gg
	♀	RR	Rg

Probability of red eyes:
 $\frac{3}{4}$ out of $\frac{4}{4}$

Probability of green eyes:
 $\frac{1}{4}$ out of $\frac{4}{4}$

Calf's horns: Dominant long horns or recessive no horns

	BULL	L	L
COW	♀	LL	LL
	♀	LL	LL

Probability of long horns:
 $\frac{4}{4}$ out of $\frac{4}{4}$

Probability of no horns:
 $\frac{0}{4}$ out of $\frac{4}{4}$

Calf's tail: Dominant straight or recessive curly

	BULL	S	c
COW	♀	Sc	cc
	♀	Sc	cc

Probability of a straight tail:
 $\frac{2}{4}$ out of $\frac{4}{4}$

Probability of a curly tail:
 $\frac{2}{4}$ out of $\frac{4}{4}$