

The NewWorm©
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The left box shows what we know about NewWorms' genes. The right box shows the genetic makeup of two NewWorms. Use this information to solve the problems below.

NewWorm Genetics	Two NewWorm Genotypes	
Body: Flat: BB or Bb Round: bb	NewWorm1	NewWorm2
Mouth: Oval: ?? Slit: ??		
Head: Broad: ?? Medium: ?? Narrow: ??		
Rings: No Rings: RR or Rr Rings: rr		
Color: Green: CC Brown: Cc Black: cc		
Tail (Male): Pointed: TT or Tt Blunt: tt		
Tail (Female): Pointed: T- Blunt: t- (The Tail gene is on the X chromosome.) (The - [dash] stands for the Y chromosome.)		
Sex: Males: XX Females: XY		

GENOTYPE-PHENOTYPE MAPPING

Determine phenotypes (traits) from NewWorm1 and NewWorm2's genotypes:

	NewWorm1		NewWorm2	
What body shape?	1a.	_____	1b.	_____
Does it have rings?	2a.	_____	2b.	_____
What color?	3a.	_____	3b.	_____
What kind of tail?	4a.	_____	4b.	_____
Male or female?	5a.	_____	5b.	_____

If the allele for **oval mouth (M)** is dominant to the allele for **slit mouth (m)**:

What kind of mouth?	6a.	_____	6b.	_____
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If the allele for **broad head (H)** is incompletely dominant to the allele for **narrow head (h)** and **medium head** is in between broad and narrow:

What kind of head?	7a.	_____	7b.	_____
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