Naı	me:	Period	d:	Date:
	MCAS Open Response	e Question – Genetics		
An	swer the following MCAS question. Think about t most complete answer you can. You will rece	he scoring rubric we saw in ive a score based on the MC	n class CAS sc	s and try to giv coring rubric.
Con	rn snakes show variety in their skin color pattern. nplex, the most common colors on normal corn sn	While the complete genetic akes—red and black— are e	cs of c	corn snake colo oded by one ger
of 1	r the red gene, the allele for the presence of red pi red pigment (r) is recessive. Likewise, for the bla d is dominant and the allele for the absence of black	ck gene, the allele for the p	the a resen	llele for the abs ce of black pig
a.	Draw the Punnett square for the cross of a snake snake that is heterozygous for the red color. What pigment in their skin?	that is homozygous domina at percentage of the offsprir	nt for ng is e	the red color wexpected to hav
b. c.	Draw the Punnett square for the cross of two snakes that are heterozygous for the black color. We percentage of the offspring is expected to have black pigment in their skin? The parent snakes in part (b) that are heterozygous for black color are both homozygous recessive the red gene. Each parent has genotype rr for the red gene. Based on this information, we percentage of their offspring is expected to lack both the red and black pigments in their skin? Exp your reasoning.			
	your reasoning.			

Name:	_	Period:	Date: