Offspring Model: Insect

Name: _____

Part A. Insect.

1. Determine the genotype and phenotype of the insect by flipping both coins. Heads is the dominant allele and tails is the recessive allele. For example, for body segments, if you flip two heads, the genotype would be BB; one head and one tail would be Bb; two tails would be bb.

2. Circle the genotype and phenotype in the correct columns.

Trait	Dominant (Heads – Heads)	Dominant (Heads – Tails)	Recessive (Tails – Tails)
Body segments	3 segments (BB)	3 segments (Bb)	2 segments (bb)
Wings	2 pairs (WW)	2 pairs (Ww)	1 pair (ww)
Legs	3 pairs (PP)	3 pairs (Pp)	2 pairs (pp)
Leg color	Yellow colored (CC)	Yellow colored (Cc)	Orange colored (cc)
Eye color	Blue (EE)	Blue (Ee)	Green (ee)
Body segment shape	Round (RR)	Round (Rr)	Oval (rr)
Antennae color	Purple (AA)	Purple (Aa)	Red (aa)
Body segment color	Red polka dot (DD)	Red polka dot (Dd)	White (dd)
Wing color	Green (QQ)	Green (Qq)	Purple Polka Dot (qq)
Protruding proboscis	Blue (MM)	Blue (Mm)	Yellow (mm)

3. Design space. Use the data above and draw your animal on the graph paper below. The graph paper is just to help you space out the insect. (I don't want to see a squished insect.)

Part B. More Punnett Square Practice. Complete the monohybrid crosses below. Once the Punnett square is complete, please make sure you let me know the inheritance percentages. One has been completed as an example.

► A green pea plant (Gg) is crossed with a yellow pea plant (gg).

	G	g
g	Gg	gg
g	Gg	gg

There is a 50% chance that the offspring will be green and a 50% chance the offspring will be yellow.

► A tall plant (TT) is crossed with a tall plant (Tt).

► A tall plant (Tt) is crossed with a short plant (tt).

► A red flower (Rr) is crossed with a white flower (rr).

► A white flower (rr) is crossed with a white flower (rr).

► A black chicken (BB) is crossed with a black chicken (BB).