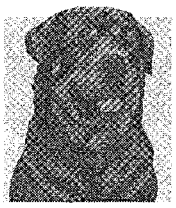
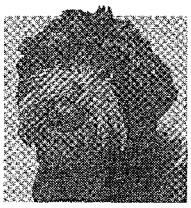
DOG - BLOOD WORK SHEET

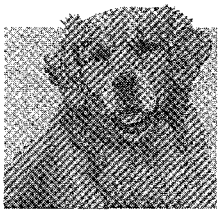
PART 1: Here are six dogs. In the small box below each dog write the genes present in the body cells of that dog. Use the letter "B" for black and "b" for brown. Below the diagram put the genes in the 2 sex cells, two sperm for the male dogs and two eggs for the female dogs, use "B" or "b" as appropriate.



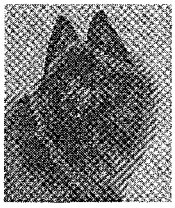
Rover
Male Dog
Pure Dominant



Skipper
Male Dog
Heterozygous

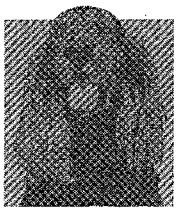


Biscuit
Male Dog
Pure Recessive



Freckles
Female Dog
Pure Dominant

Bruiser
Female Dog
Heterozygous

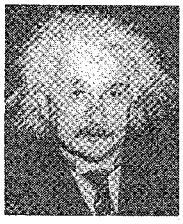


Ginger
Female Dog
Pure Recessive

PART 2: Complete the table below for the mating of the indicated dogs.

FATHER	Possible Genes in Sperm	MOTHER	Possible Genes in eggs	All Zygote Combinations		Offspring Color	
						% Black	% Brown
ROVER	B + B	FRECKLES					
ROVER		BRUISER					
SKIPPER		FRECKLES					
SKIPPER		BRUISER					
BISCUIT		BRUISER					
BISCUIT		GINGER					

PART 3: Here are six people. In the small box below each write the genes present in their body cells related to their blood type. Assume heterozygous unless told otherwise. Below the diagram put the genes they could put in their gametes.



Albert
A - Homozygous

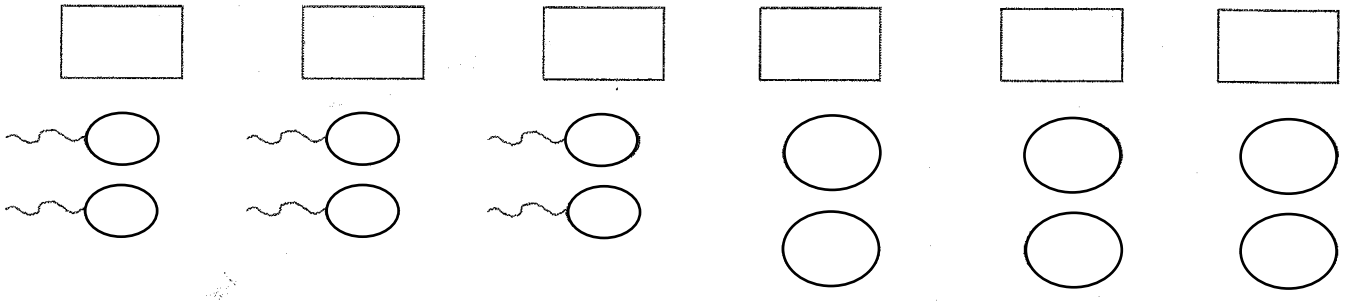
Brad
Type B

Will
Type AB

Oprah
Type O

Zoe
Type A

Emma
Type AB



PART 4: Complete the table below for the hypothetical mating of the people indicated.

FATHER	Possible Genes in Sperm	MOTHER	Possible Genes in eggs	All Zygote Combinations		Offspring Blood Type			
						%A	%B	%AB	%O
WILL		OPRAH							
BRAD		EMMA							
BRAD		ZOE							
ALBERT		EMMA							
ALBERT		ZOE							
WILL		EMMA							