

Dogs from Saturn: Using the data below, determine the inheritance of coat color (black, yellow) and tail length (long, short). Determine whether each trait is autosomal or sex-linked, and which allele is dominant or recessive. The parental genotypes are unknown (i.e., you cannot assume that they are homozygous).

Cross	parental phenotype	offspring phenotypes			
		black, short	black, long	yellow, short	yellow, long
1	black, short x black, short	89	31	29	11
2	black, short x yellow, long	18	19	0	0
3	black, short x yellow, short	20	0	21	0
4	yellow, short x yellow, short	0	0	28	9
5	black, long x black, long	0	32	0	10
6	black, short x black, short	46	16	0	0
7	black, short x black, long	30	31	9	11

Mice from Pluto: Using the data below, determine the inheritance of coat color (gray, white) and tail shape (bent, normal). Determine whether each trait is autosomal or sex-linked, and which allele is dominant or recessive. The parental genotypes are unknown (i.e., you cannot assume that they are homozygous).

	♂♂	♀♀	♂♂	♀♀
1	gray, normal	white, bent	$\frac{1}{2}$ gray, bent $\frac{1}{2}$ white bent	$\frac{1}{2}$ gray, normal $\frac{1}{2}$ white, normal
2	gray, bent	white, normal	$\frac{1}{2}$ gray, bent $\frac{1}{2}$ gray, normal	$\frac{1}{2}$ gray, bent $\frac{1}{2}$ gray, normal
3	white, bent	white, normal	white, bent	white, bent
4	gray, normal	gray, normal	gray, normal	gray, normal
5	gray, bent	gray, bent	$\frac{3}{4}$ gray, bent $\frac{1}{4}$ white, bent	$\frac{3}{4}$ gray, bent $\frac{1}{4}$ white, bent
6	white, bent	gray bent	gray, bent	$\frac{1}{2}$ gray, bent $\frac{1}{2}$ gray, normal