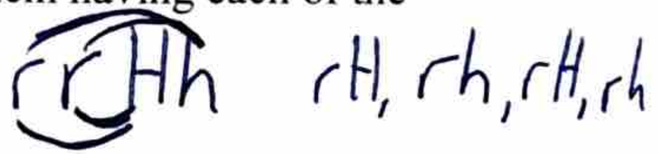
Dihybrid Crosses

Attached earlobes- EE, Ee	Can roll tongue- RR, Rr	Hair on mid-digit – MM, Mm
Free earlobes – ee	Can't roll tongue – rr	No hair on mid-digit – mm
Hitchhikers thumb- HH, Hh	Straight pinky- PP, Pp	Widow's Peak – WW, Ww
Straight thumb – hh	Bent pinky- pp	No widow's peak - ww

9. If a woman who is a non-tongue roller (recessive) (rr) with heterozygous hitchhikers (Hh) thumb has children with a man who is a heterozygous tongue-roller (Rr) with straight thumbs (recessive) (hh), what is the probability of them having each of the following types of children? (Fill in the Punnett Square and the blanks). FOIL!



Parents' genotypes rrHh X Rrhh

a. How many tongue-roller, Hitchhikers thumb 4 (RrHh)

b. How many tongue-roller, straight thumb 4 (Rrhh)

c. How many Non-tongue-roller, Hitchhikers thumb 4 (rrHh)

d. How many Non-tongue-roller, straight thumb 4 (rrhh)

e. What is the phenotypic ratio? 4:4:4:4 (1:1:1:1)

	Rh	Rh	rh	rh
rH	RrHh	RrHh	rrHh	rrHh
rh	Rrhh	Rrhh	rrhh	rrhh
rH	RrHh	RrHh	rrHh	rrHh
rh	Rrhh	Rrhh	rrhh	rrhh

10. If a woman who has no hair on her mid-digit (recessive)and is homozygous attached earlobes (dominant) has children with a man who has hair on his mid-digit and has attached earlobes (heterozygous for both traits), what is the probability