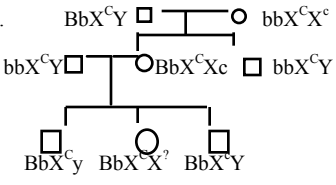
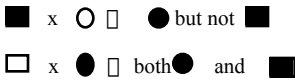


ANSWERS TO MENDELIAN GENETICS PROBLEMS

1. $1/8$
2. $1/4$
3. $1/4$
4. Because the sex of the first child is irrelevant.
5. a. none
b. $1/4$
c. $1/2$
6. a. gamete types: Parent A; 4, Parent B; 8
possible phenotypes = 4
b. $3/16$
c. $1/4$
7. a. female bb; male BB; children all Bb
b. $1/4$
c. $1/8$
8. a. $1/64$
b. $1/32$
c. Parent A; 16, Parent B; 8
9. a. all roan
b. $1/2$ red, $1/2$ roan
c. $1/4$ red, $1/2$ roan, $1/4$ white
10. a. 8
b. 72
c. 12
d. 37.5%
0
18.75%
11. a. $1/2$ A; $1/2$ B
b. Ai and Bi
c. AB and Bi
12. a. type A father (#1)
b. type A father (#1)
13. zero
14. a. female = Aabb
male = aaBb
b. $1/4$
c. female = aaBb
male = AaBb
d. 1 white, 3 black, 2 red, 0 liver, 0 lemon, 2 grey
15. male = AaRr; female = Aarr
16. a. father = X^+Y
mother = X^+X^c
son = X^cY
b. zero
17. a. 
b. $1/4$
c. $1/2$
d. $1/16$
18. The trait is dominant and probably carried on the sex (X) chromosome because

19. a. autosomal dominant
b. Ff x Ff
c. $1/2$
20. Blue, tall = .37 White, tall = .13
Blue, dwarf = .13 White, dwarf = .37
21. a. 27%
b. 27
c. Cb//cB
22. a. 3 d. $1/8$
b. 8 e. independent assortment
c. 3 f. segregation