	Inkeu	Traits Pra	crice Nume.			Date:	
n fruit	t flies, e	eye color is a	a <b>sex-linked trait</b> .	Red (R) eyes are dominant	to white	(r) eyes.	
	Since the characteristic is sex-linked, on which chromosome (X or Y) will the allele for fly eye color be located?						
2. W	hat are	the sexes a	and eye colors of flie	es with the following genoty	pes?		
<b>X</b> <sup>R</sup> <b>X</b>	<b>('</b> se	x:	_ eye color:	X <sup>R</sup> Y sex:	:	_ eye color:	
X <sup>R</sup> X	K <sup>R</sup> se	x:	_ eye color:	X <sup>r</sup> Y sex:	:	eye color:	
3.	What	are the gen	otypes of these flies	s?			
				red eyed female (he red eyed, male			
4.	Show	the cross o	f a white eyed fema	lle (X <sup>r</sup> X <sup>r</sup> ) with a red-eye	⊧d male ( <b>λ</b>	( <sup>R</sup> Y).	
						1	
5.	What	are the pos	sible <i>genotypes</i> of t	he male offspring?			
				he <b>male</b> offspring?			
6.	What	are the pos	sible <i>phenotypes</i> of				
6. 7.	What What	are the pose are the pose	sible <i>phenotypes</i> of sible <i>genotypes</i> of t	the male offspring?			
6. 7. 8.	What What What	are the pose are the pose are the pose	sible phenotypes of sible genotypes of t sible phenotypes of	the <b>male</b> offspring? he <b>female</b> offspring?			
6. 7. 8.	What What What Let's	are the poss are the poss are the poss now perform	sible phenotypes of sible genotypes of t sible phenotypes of	the <b>male</b> offspring? he <b>female</b> offspring? the <b>female</b> offspring? homozygous red-eyed fem			
6. 7. 8.	What What What Let's a.	are the post are the post are the post now perform What are t	sible <i>phenotypes</i> of sible <i>genotypes</i> of t sible <i>phenotypes</i> of n a cross between a the genotypes of th	the <b>male</b> offspring? he <b>female</b> offspring? the <b>female</b> offspring? homozygous red-eyed fem	nale and a		
6. 7. 8.	What What What Let's a.	are the post are the post are the post now perform What are t	sible <i>phenotypes</i> of sible <i>genotypes</i> of t sible <i>phenotypes</i> of n a cross between a the genotypes of th	the <b>male</b> offspring? he <b>female</b> offspring? the <b>female</b> offspring? homozygous red-eyed fem e parents? the possibility that the offsp	nale and a & pring are:		%
6. 7. 8.	What What What Let's a.	are the post are the post are the post now perform What are t	sible <i>phenotypes</i> of sible <i>genotypes</i> of t sible <i>phenotypes</i> of n a cross between a the genotypes of th	the <b>male</b> offspring? the <b>female</b> offspring? the <b>female</b> offspring? the <b>female</b> offspring? the possibility red-eyed fem the possibility that the offsp white eyed, male	nale and a & oring are: %	a white-eyed male!	
6. 7. 8. 9.	What What Let's a. b.	are the pose are the pose are the pose now perform What are the Complete	sible <i>phenotypes</i> of sible <i>genotypes</i> of t sible <i>phenotypes</i> of n a cross between a the genotypes of th the cross. What is f a red-eyed female the genotypes of th	the <b>male</b> offspring? the <b>female</b> offspring? the <b>female</b> offspring? the <b>female</b> offspring? homozygous red-eyed fem e parents? the possibility that the offsp white eyed, male white eyed, female the terozygous) and a red-tere e parents?	nale and a _& oring are: % % eyed male _&	a white-eyed male! red eyed, male red eyed, female	
6. 7. 8. 9.	What What Let's a. b.	are the pose are the pose are the pose now perform What are the Complete	sible <i>phenotypes</i> of sible <i>genotypes</i> of t sible <i>phenotypes</i> of n a cross between a the genotypes of th the cross. What is f a red-eyed female the genotypes of th	the <b>male</b> offspring? the <b>female</b> offspring? the <b>female</b> offspring? the <b>female</b> offspring? homozygous red-eyed fem e parents? the possibility that the offsp white eyed, male white eyed, female e (heterozygous) and a red- e parents? the possibility that the offsp	nale and a & oring are: % % eyed male & oring are:	a white-eyed male! red eyed, male red eyed, female e.	%
6. 7. 8. 9.	What What Let's a. b.	are the pose are the pose are the pose now perform What are to Complete	sible <i>phenotypes</i> of sible <i>genotypes</i> of t sible <i>phenotypes</i> of n a cross between a the genotypes of th the cross. What is f a red-eyed female the genotypes of th	the <b>male</b> offspring? the <b>female</b> offspring? the <b>female</b> offspring? the <b>female</b> offspring? homozygous red-eyed fem e parents? the possibility that the offsp white eyed, male the terozygous) and a red- e parents? the possibility that the offsp white eyed, male	nale and a & oring are: % % eyed mak & oring are: %	a white-eyed male! red eyed, male red eyed, female	%

In humans, hemophilia is a sex-linked trait. Females can be normal, carriers, or have the disease. Males will either have the disease or not (but they won't ever be carriers). Write the genotypes for the following phenotypes.

= female, normal	= male, normal
= female, carrier	= male, hemophiliac
= female, hemophiliac	
12. Show the cross of a man who has hemophili	a with a woman who is a carrier.

What is the probability that their children will have the disease? \_\_\_\_\_% What is the probability that their sons will have the disease? \_\_\_\_\_% What is the probability that their daughters will have the disease? \_\_\_\_\_% 14. A woman who is a carrier marries a normal man. Show the cross.

 What is the ratio of normal sons to hemophiliac sons?

 Is that the genotypic or phenotypic ratio?

15. A woman who has hemophilia marries a normal man.

What percentage of their children would you predict to have hemophilia? \_\_\_\_\_\_ Will more, less, or equal boys be affected by hemophilia than girls? \_\_\_\_\_\_ Why is this?