Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_ Block \_\_\_\_\_\_\_\_\_

**Human Punnett Square Practice**

**Vocabulary**:

1. Female – XX
2. Male – XY
3. X-Linked – a trait carried on the X chromosome
4. Y-Linked – a trait carried on the Y chromosome
5. Normal – can be a carrier (XHXh) or normal (XHXH)
6. Carrier – only females with one affected chromosome (XHXh)
7. **Determining Gender**
8. Mother (**XX**) X Father (**XY**)

 Genotype:

 \_\_\_\_% - XX

 **XX** \_\_\_\_% - XY

Phenotype:

 **XY** 50% - \_\_\_\_

 50% - \_\_\_\_

1. **Sex-Linked Traits**
2. **Color-blindness: X-linked recessive (b)**
3. Carrier mother (**\_\_\_\_\_\_\_**) X Normal father (**XBY**)

 Genotype:

 25% -

 **XBXb** 25% -

 25% -

 25% -

* What percentage of the children are **normal**, who?
* What percentage of the children are **color-blind**, who?
* What percentage of the children are **carriers**, who?
1. Normal mother (**\_\_\_\_\_\_\_**) X Color-blind father (**\_\_\_\_\_\_\_**)

 Genotype:

 \_\_\_\_% -

 \_\_\_\_% -

* What percentage of the children are **carriers**, who?
* What percentage of the children are **color-blind**, who?
* What percentage of the children are **normal**, who?
1. Carrier mother (**\_\_\_\_\_\_\_**) X Normal father (**\_\_\_\_\_\_\_**)

 Genotype:

 \_\_\_\_% -

 \_\_\_\_% -

* What percentage of the children are **carriers**, who?
* What percentage of the children are **color-blind**, who?
* What percentage of the children are **normal,** who?
1. **Hemophilia: X-linked recessive (h)**
2. Carrier mother (**XHXh**) X Normal father (**XHY**)

 Genotype:

 \_\_\_\_% -

 \_\_\_\_% -

\_\_\_\_% -

\_\_\_\_% -

* What percentage of the children are **hemophiliacs**, who?
* What percentage of the children are **carriers**, who?
* What percentage of the children are **normal,** who?
1. Hemophiliac mother (**\_\_\_\_\_\_\_**) X Normal father (**\_\_\_\_\_\_\_**)

 Genotype:

 \_\_\_\_% -

 \_\_\_\_% -

* What percentage of the children are **carriers**, who?
* What percentage of the children are **hemophiliacs**, who?
* What percentage of the children are **normal,** who?
1. Normal mother (**\_\_\_\_\_\_\_**) X Hemophiliac father (**\_\_\_\_\_\_\_**)

 Genotype:

 \_\_\_\_% -

 \_\_\_\_% -

* What percentage of the children are **carriers**, who?
* What percentage of the children are **hemophiliacs**, who?
* What percentage of the children are **normal,** who?
1. **Hairy Ears: Y-linked recessive (h)**
2. Normal mother (**\_\_\_\_\_\_\_**) X Hairy eared father (**\_\_\_\_\_\_\_**)

 Genotype:

 \_\_\_\_% -

 \_\_\_\_% -

* What percentage of the children are **normal**, who?
* What percentage of the children have **hairy ears**, who?
* Can females have hairy ears?
* Can females be carriers?
* Who do the male children get their Y chromosome from?