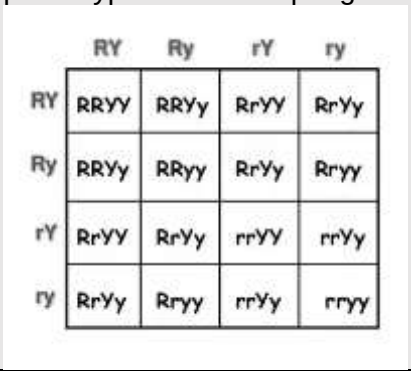
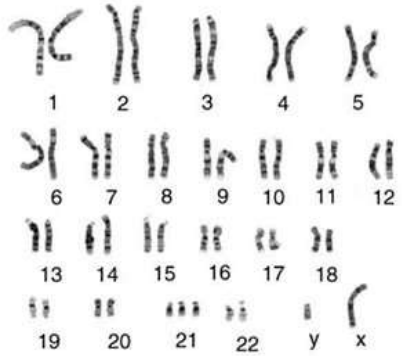
Name _____ Block _____ Date _____

**Unit 6 Checklist – Mendelian Genetics**

| # | Question | Lesson Exit Ticket |
|---|---|---|
| 1 | Identify the man who performed experiments with **pea plants** and discovered the "**gene**" | |
| 2 | Explain the relationship between an **allele** and a **gene** | |
| 3 | Explain the relationship between a **genotype** and a **phenotype** | |
| 4 | Contrast a **homozygous** genotype with a **heterozygous** genotype | |
| 5 | Contrast a **recessive** allele with a **dominant** allele | |
| 6 | Brown fur (B) is dominant to white fur (b) in rabbits. Describe the **phenotype** of each given **genotype** | 1. BB _____<br>2. Bb _____<br>3. bb _____ |
| 7 | Identify each genotype as **homozygous dominant**, **homozygous recessive**, or **heterozygous** | 1. BB _____<br>2. Bb _____<br>3. bb _____ |
| 8 | A male rabbit has the genotype Bb for fur color. **What percent** of his offspring will receive his dominant allele? Explain. | |
| 9 | Based on this cross, what percent offspring will have brown fur? What percent will be heterozygous? What percent will be homozygous recessive?<br><br>b b<br>B<br>b | 1. Brown fur _____<br>2. White fur _____<br>3. Heterozygous _____<br>4. Homozygous recessive _____<br>5. Homozygous dominant _____ |

| # | Question | Lesson Exit Ticket |
|---|---|---|
| 10 | Set up and complete a **Punnett Square** for the following cross: A homozygous dominant male (BB) is crossed with a homozygous recessive female (bb) | |
| 11 | The following dihybrid cross is between 2 round, yellow pea plants (**RrYy** x **RrYy**). Describe the ratio of phenotypes in the offspring.<br>  <br> | Round (R) is dominant to wrinkled (r); Yellow (Y) is dominant to green (y)<br><br>Round, yellow _____<br><br>Round, green _____<br><br>Wrinkled, yellow _____<br><br>Wrinkled, green _____ |
| 12 | <u>Define</u> a **polygenic** trait and describe an <u>example</u> | |
| 13 | <u>Define</u> **incomplete dominance** and describe an <u>example</u> | |
| 14 | <u>Define</u> a trait with **multiple alleles** and describe an <u>example</u> | |
| 15 | <u>Define</u> a **sex-linked** trait and describe an <u>example</u> | |
| 16 | <u>Explain</u> what causes chromosomal mutations and give an example of a condition caused by a chromosomal mutation. | |
| 17 | Interpret the following karyotype:<br>  <br> | 1. Sex: _____<br><br>2. Mutation: _____ |