**Introduction to Proofs PRACTICE Test**

**In Questions #1 – #11, identify the algebra property or geometric definition, theorem, or postulate illustrated.**

**1. If , then**

**2. If , then**

**3. If , then**

**4. If , then .**

**5. If Q is between P and R, then PQ + QR = PR.**

**6.**

**7. If , then .**

**8. If and , then .**

**9. If ∠ A is a right angle, then m∠ A = 90º.**

**10. If ∠ 3 and ∠ 4 are complementary, then m∠ 3 + m∠ 4 = 90º.**

**11. If ∠ J and ∠ K form a linear pair, then ∠ J and ∠ K are supplementary**

**In Question #12, solve the equation and write a reason for each step.**

**12.**

|  |  |
| --- | --- |
| **1.** | **1. Given** |
| **2.** | **2.** |
| **3.** | **3.** |
| **4.** | **4.** |
| **5.** | **5.** |
| **6.** | **6.** |

**In Question #13 and 14, fill in the blanks to complete the following proofs, using the diagram to the right.**

**13.**

****

|  |  |
| --- | --- |
| **Statements** | **Reasons** |
| **1.** | **1.** |
| **2.** | **2.** |
| **3.** | **3.** |
| **4.** | **4.** |
| **5.** | **5.** |
| **6.** | **6.** |

**14.**

****

|  |  |
| --- | --- |
| **Statements** | **Reasons** |
| **1.** | **1.** |
| **2.** | **2.** |
| **3.** | **3. Given sketch** |
| **4.** | **4.** |
| **5.** | **5.** |
| **6.** | **6.** |
| **7.** | **7.** |
| **8.** | **8.** |

**In Question #15 and 16, complete the proofs.**

**15.**

|  |  |
| --- | --- |
| **Statements** | **Reasons** |
| **1.** | **1.** |
| **2.** | **2.** |
| **3.** | **3.** |
| **4.** | **4.** |
| **5.** | **5.** |
| **6.** | **6.** |
| **7.** | **7.** |
| **8.** | **8.** |
| **9.** | **9.** |
| **10.** | **10.** |
| **11.** | **11.** |

**16. Given:**

**Prove:**

****

|  |  |
| --- | --- |
| **Statements** | **Reasons** |
| **1.** | **1.** |
| **2.** | **2.** |
| **3.** | **3.** |
| **4.** | **4.** |
| **5.** | **5.** |
| **6.** | **6.** |
| **7.** | **7.** |
| **8.** | **8.** |
| **9.** | **9.** |
| **10.** | **10.** |
| **11.** | **11.** |
| **12.** | **12.** |

**In Question #17, 18, and 19, find the measures of angle a, b, and c and write a reason for your answer.**

**17.**

****

**18.**

****

**19.**

****