Some of Euclid’s Postulates and Propositions About Constructions

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| **Postulates** | Restate each postulate or proposition, naming the given objects and the objects to be constructed and their properties |
| **Postulate 1.** **To draw a straight line** from any point to any point. | Given points A and B it is possible to construct the segment |
| **Postulate 2.** **To produce a finite straight line** continuously in a   straight line. |  |
| **Postulate 3.** **To describe a circle** with any center and radius. |  |
| **Propositions** |  |
| **Proposition 1.** To construct an equilateral triangle on a given finite straight line. | **D** |
| **Proposition 2.** To place a straight line equal to a given straight line with one end at a given point. | **D** |
| **Proposition 3.** To cut off from the greater of two given unequal straight lines a straight line equal to the less. |  |
| **Proposition 9.** To bisect a given rectilinear angle. |  |
| **Proposition 10.** To bisect a given finite straight line. |  |
| **Proposition 11.** To draw a straight line at right angles to a given straight line from a given point on it. |  |
| **Proposition 12.** To draw a straight line perpendicular to a given infinite straight line from a given point not on it. |  |
| [**Proposition 22.**](http://aleph0.clarku.edu/%7Edjoyce/java/elements/bookI/propI22.html) To construct a triangle out of three straight lines which equal three given straight lines: thus it is necessary that the sum of any two of the straight lines should be greater than the remaining one. |  |
| [**Proposition 23.**](http://aleph0.clarku.edu/%7Edjoyce/java/elements/bookI/propI23.html) To construct a rectilinear angle equal to a given rectilinear angle on a given straight line and at a point on it. | **D** |

**D= diagram also required. Use red for givens, and blue for construction.**