Dependency Graph of Propositions in Euclid's Elements

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This is a dependency graph of propositions from the first book of Euclid's Elements. We say that a proposition A depends on B iff proposition B is necessary in the proof of proposition A. In the dependency graph below, this will be denoted by an arrow starting at A and pointing at B.

Figure 1 is a dependency graph of all propositions in the first book. Figure 2 is a dependency graph of all propositions that state a relation between two objects, while Figure 3 is a dependency graph of all propositions that state the existance of an unmarked straightedge and compass construction of something.

The dependencies were gratfully extracted from Richard Fitzpatrick's edition of Euclid's *Elements*. The graph itself was written in `DOT` and converted to pslatex with `dot2tex`. The motivation for this graph was from Mariusz Wodzicki's Spring 2007 History of Mathematics course at the University of California, Berkeley. Corrections and comments are always appreciated at `thomson@ocf.berkeley.edu`.
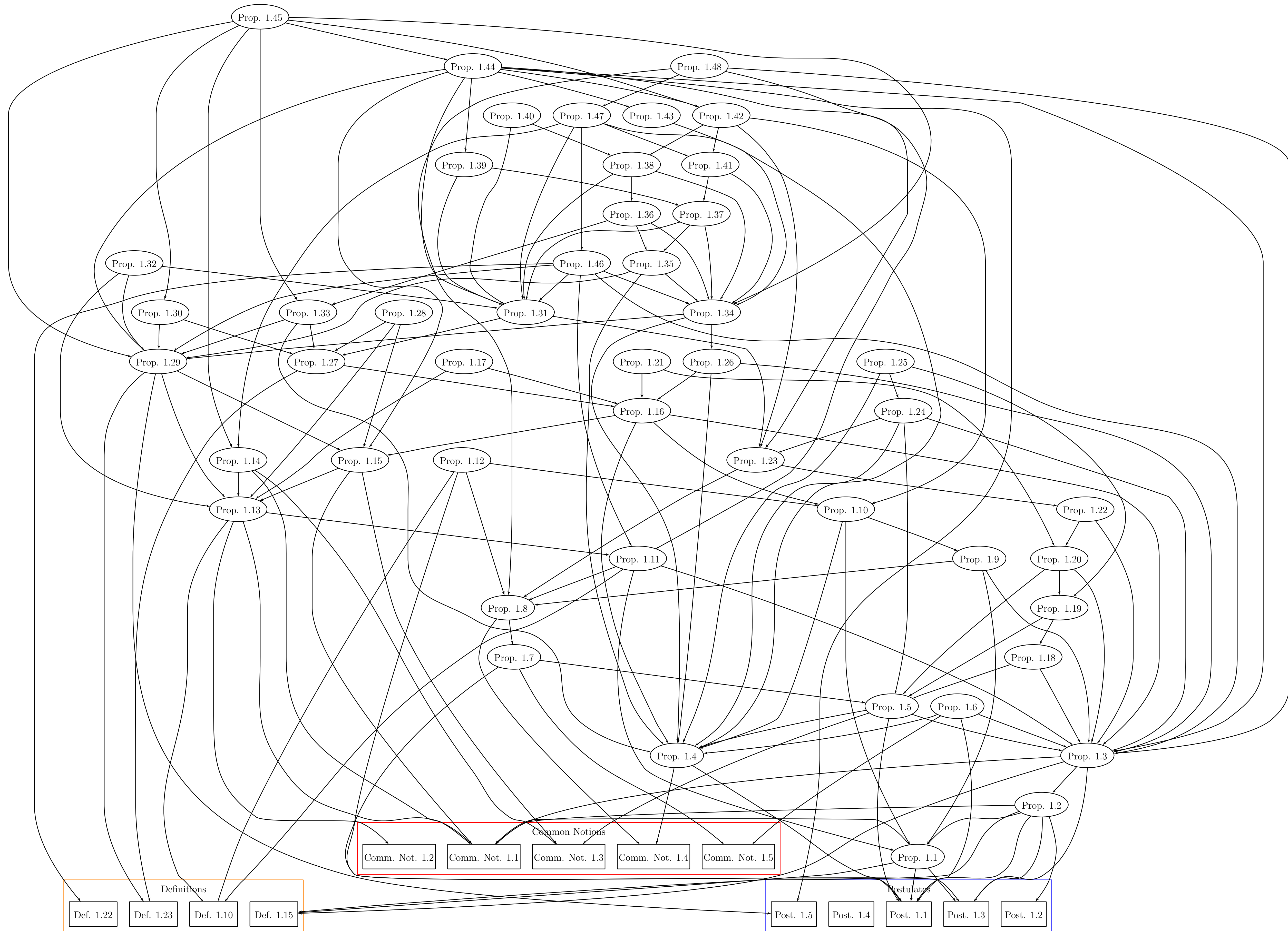
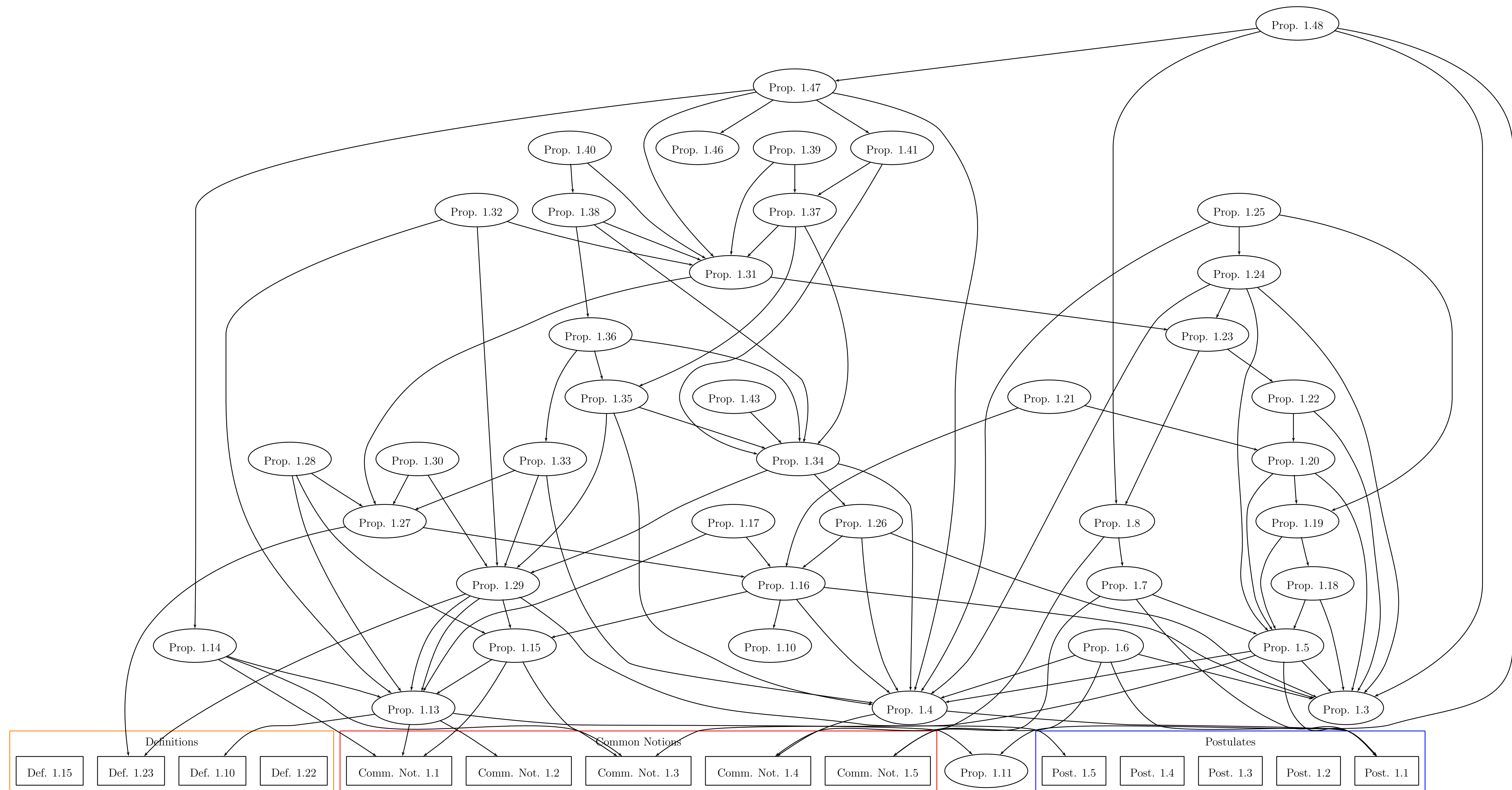Figure 1: Dependency graph of Propositions from Book I of Euclid's *Elements*.

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Figure 2: Dependency graph of Relation Propositions from Book I of Euclid's *Elements*.
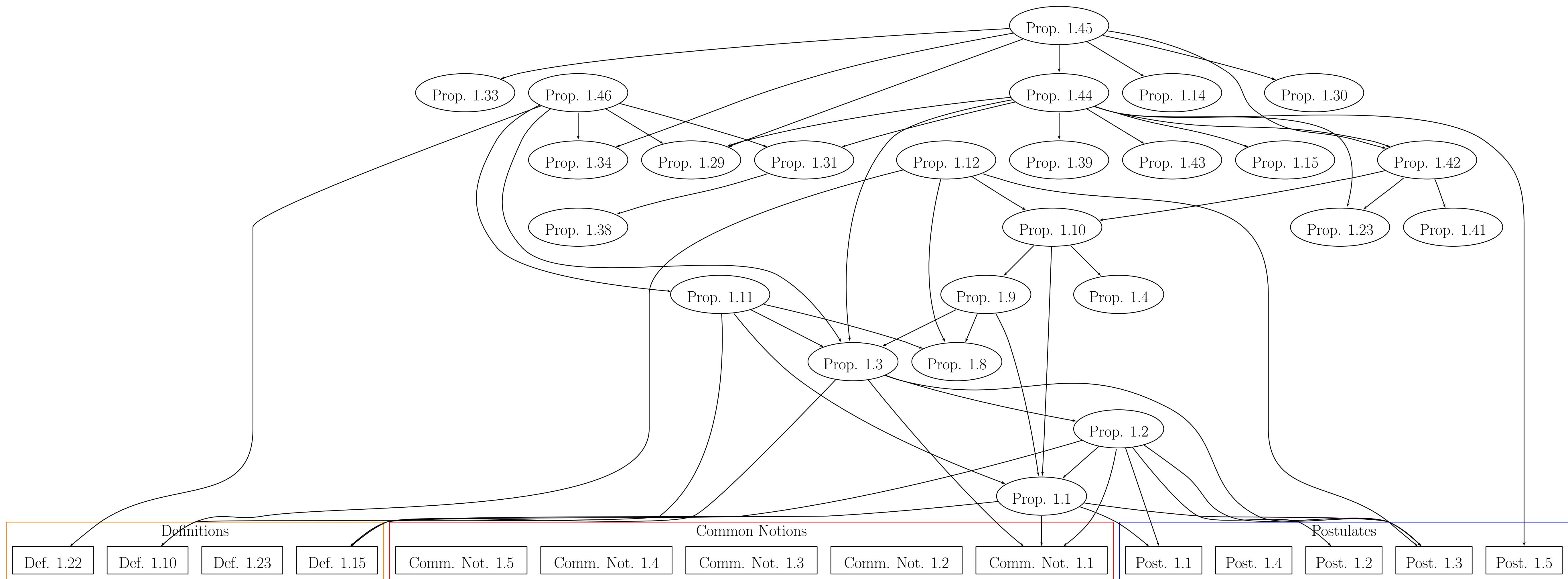
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Figure 3: Dependency graph of Construction Propositions from Book I of Euclid's *Elements*.

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