Mathematics 2260H – Geometry I: Euclidean Geometry
Trent University, Winter 2023
Assignment #1
Make a (Regular) Tetragon
Due on Friday, 20 January.*

In both of the problems below you are not required to prove that your construction does the job, though you might want to check for yourself, just in case . . .

1. Given a line (segment), give a step-by-step description of how to construct, using an unmarked straightedge and a compass, a quadrilateral with the given line (segment) as one of its sides, and with the other three sides equal to the given one in length. *[5]*

Of course, problem **1** is just a warm-up for problem **2**:

2. Given a line (segment), give a step-by-step description of how to construct, using an unmarked straightedge and a compass, a square with that line (segment) as one of the sides. *[5]*

NOTE. Problem **2** is a counterpart for squares of Proposition I-1 (for equilateral triangles), though somewhat more difficult because of the right angles involved.

Sonnet xlv

Euclid alone has looked on Beauty bare.
Let all who prate of Beauty hold their peace,
And lay them prone upon the earth and cease
To ponder on themselves, the while they stare
At nothing, intricately drawn nowhere
In shapes of shifting lineage; let geese
Gabble and hiss, but heroes seek release
From dusty bondage into luminious air.
O blinding hour, O holy, terrible day,
When first the shaft into his vision shone
Of light anatomized! Euclid alone
Has looked on Beauty bare. Fortunate they
Who, though once only and then but far away,
Have heard her massive sandal set on stone.

Edna St. Vincent Millay