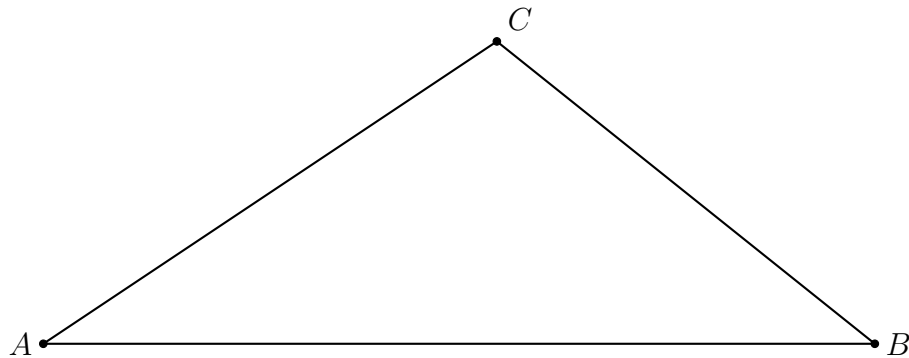


Homework: Construct an altitude, distance application

Use only a compass and straightedge for these classical constructions.

1. Construct a perpendicular to \overline{AB} through C .



2. Given the conditional statement, "If the corresponding angles of a transversal are congruent, then the two lines are parallel."
 - (a) Write down the hypothesis.
 - (b) Write down the converse of the statement.
 - (c) Write down the contrapositive of the statement.

3. Given the quadrilateral $RSTU$ with $R(1, 3)$, $S(4, 7)$, $T(4, 2)$, and $U(1, -2)$.

- (a) Plot and label $RSTU$ on the grid.
- (b) Using the distance formula or otherwise, calculate RS , ST , TU , and RU .
- (c) Definition: If a quadrilateral has four congruent sides, then it is a rhombus.

Prove that $RSTU$ is a rhombus.

