When in the problems below we say that some *lengths are given*, assume that there is an interval of a given length already drawn on the paper.

(1) Given a line l and a point A on l, construct a perpendicular to l through A.

(2) Given a line l and a point P outside of l, construct a perpendicular to l through P.

(3) Given an angle AOB, construct the angle bisector (i.e., a ray OM such that $\angle AOM \cong \angle BOM$).

(4) Given length a, construct an equilateral triangle with side a.

(5) Given length a, construct a regular hexagon with side a.

(6) Given three lengths a, b, c, construct a triangle with sides a, b, c.

(7) Construct an isosceles triangle, given a base b and altitude h.

(8) Construct a right triangle, given a hypotenuse h and one of the legs a.

(9) A, B, C, D are four points on a piece of paper. If $\overline{AB} = 5$, $\overline{AC} = 2$, $\overline{CD} = 1$, $\overline{DB} = 2$. What is $\overline{BC}$?

(10) Side AC of $\triangle ABC$ has length 3.7. Side AB has length 0.5. If you are told that the length of BC is an integer, determine its value.