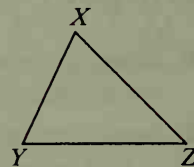


- (12) Division of a given segment into any number of congruent parts, page 396
 - (13) A segment of length x such that $\frac{a}{b} = \frac{c}{x}$ when segments of lengths a , b , and c are given, page 397
 - (14) A segment whose length is the geometric mean between the lengths of two given segments, page 397
3. Every triangle has these concurrency properties:
 - (1) The bisectors of the angles intersect in a point that is equidistant from the three sides of the triangle.
 - (2) The perpendicular bisectors of the sides intersect in a point that is equidistant from the three vertices of the triangle.
 - (3) The lines that contain the altitudes intersect in a point.
 - (4) The medians intersect in a point that is two thirds of the distance from each vertex to the midpoint of the opposite side.
 4. A locus is the set of all points, and only those points, that satisfy one or more conditions.
 5. A locus that satisfies more than one condition is found by considering all possible intersections of the loci for the separate conditions.

Chapter Review

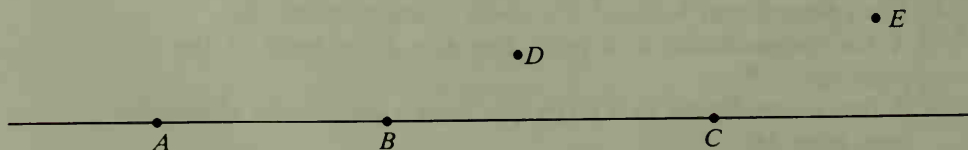
In Exercises 1–3 draw a diagram that is similar to, but larger than, the one shown. Then do the constructions.

1. Draw any line m . On m construct \overline{ST} such that $ST = 3XY$.
2. Construct an angle with measure equal to $m\angle X + m\angle Z$.
3. Bisect $\angle Y$.



10-1

Use a diagram like the one below for Exercises 4–7.



4. Construct the perpendicular bisector of \overline{AB} .
5. Construct the perpendicular to \overleftrightarrow{AC} at C .
6. Construct the perpendicular to \overleftrightarrow{AC} from D .
7. Construct the parallel to \overleftrightarrow{AC} through E .

10-2