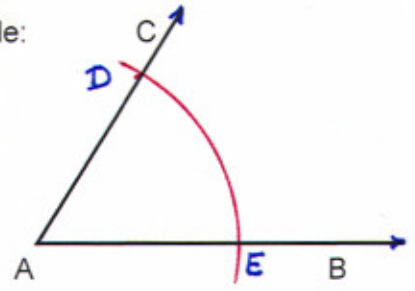
The solutions given are not the only method of solving each question.

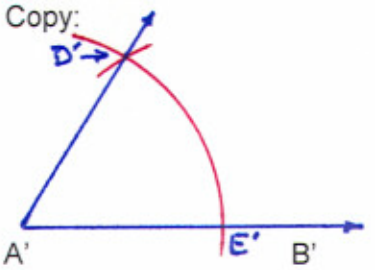
§H. CONSTRUCTIONS

1. Use your straightedge to make an angle. Then use compass and straightedge to make a duplicate copy of the angle. All arcs necessary for the construction must be clearly shown. Accuracy and neatness count.

Angle:

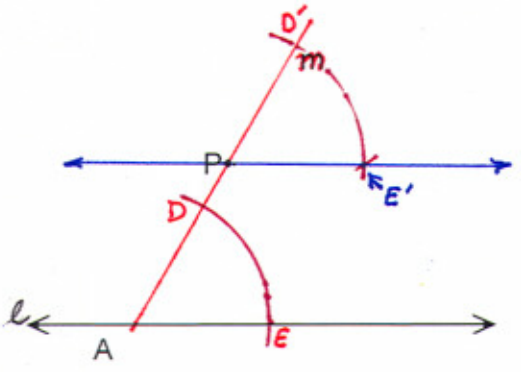


Copy:



What was done:
1. Draw ray A'X
2. Create reference arc centered at A, as shown.
3. Create same radius arc centered at A'
4. Measure span from D to E, using compass.
5. Use measure to locate D' by placing compass at E'.

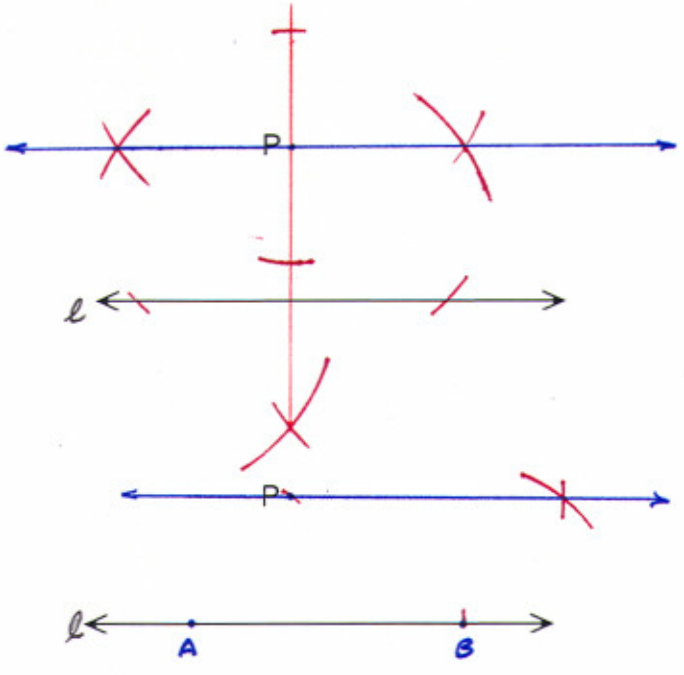
2. Mark a point not on the line segment. Then use compass and straightedge to construct a line which contains the point and is parallel to the line segment. Leave all relevant pencil marks for the construction and no others. Accuracy and neatness count.



Method shown at left:

1. We construct a transversal, m, of ℓ, through P.
2. At A, the intersection of m and ℓ, we draw the arc DE
3. Copy the angle DAE up to P using the procedure outlined in #1 above! (This locates the parallel line.)

(This construction relies on the fact that congruent corresponding angles guarantees the two lines cut by the transversal are parallel.)



Another method (more work):
1. Drop a perpendicular from P to ℓ, call that line m
   a. Draw an arc centered at P intersecting ℓ at X & Y
   b. Construct the perpendicular bisector of segment XY
2. Construct a perpendicular to m at P
   a. Draw an arc centered at P, intersecting m at S&T
   b. Construct the perpendicular bisector of segment XY

Minimal method:
Construct a parallelogram with base on ℓ:
1. Select two points on ℓ, A & B.
2. Measure AP with compass, and copy arc at B.
3. Measure AB with compass and copy to P.

The point D where these arcs cross is the fourth point of parallelogram BAPD. The line through PD is the required parallel line.