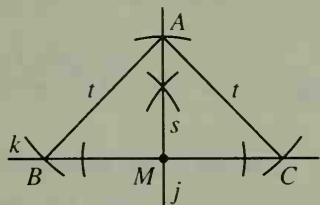
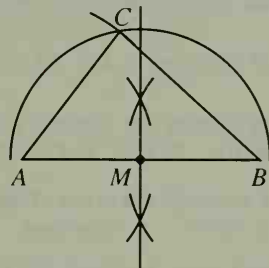


Written Exercises, Pages 412–413

1. The locus is the 2 \parallel lines. 3. The \odot , of radius a , has ctr. at the int. pt. of the bis. of $\angle XYZ$ and a line that is \parallel to \overrightarrow{YZ} and a units from \overrightarrow{YZ} . 5. The locus is a pair of lines, both \parallel to \overline{AB} and r units from \overline{AB} . Const. may vary in Exs. 7–17. 7. Const. $j \perp k$ at M . Const. \overline{MA} on j so that $MA = s$ and then \cong segs. \overline{AB} and \overline{AC} , B and C on k , so that $AB = AC = t$. 9. Const. \overline{AB} so that $AB = t$. Const. the \perp bis. of \overline{AB} to locate midpt. M of \overline{AB} . Draw an arc with ctr. M and radius r , and an arc with ctr. A and radius s intersecting at C . Draw \overline{AC} and \overline{BC} .

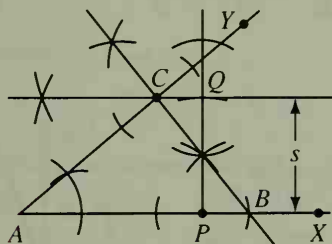


Ex. 7

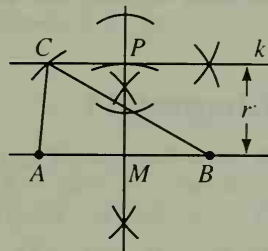


Ex. 9

11. Const. $\angle A$ with meas. n . Const. a line \parallel to and s units from \overrightarrow{AX} in order to locate point C . Const. $\overline{BC} \perp \overline{AC}$. 13. Const. \overline{AB} such that $AB = t$. Const. the \perp bis. of \overline{AB} to locate midpt. M of \overline{AB} . Const. line k , \parallel to and r units from, \overrightarrow{AB} . With ctr. M and radius s , draw an arc int. k at pt. C . Draw \overline{AC} and \overline{BC} .



Ex. 11



Ex. 13

Self-Test 3, Page 414

1. the bis. of the vert. \angle formed by j and k (2 lines) 2. the sphere with ctr. P and radius t 3. the \perp bis. plane of \overline{WX} 4. the int. of the bis. of $\angle DEF$ and a pair of rays \parallel to \overrightarrow{EF} and each 4 cm from \overrightarrow{EF} (1 pt.) 5. the int. of $\odot A$ with radius 4 cm and a line \parallel to s and t halfway between them. (0, 1, or 2 pts.) 6. Use Const. 4 to const. the \perp bis. of 2 sides of $\triangle RST$. The locus is the pt. of int. of the \perp bis. 7. Const. may vary; for example, const. $\angle X \cong \angle 1$. Const. $\overline{XY} \cong \overline{BC}$ on one side of $\angle X$. Const. a line from $Y \perp$ to the other side of $\angle X$.

Extra, Pages 414–415

3. Some of the pts. are the same: L and R , M and S , N and T . The \odot has ctr. H . 5. Key steps of proof: $\overline{NM} \parallel \overline{AB}$; $\overline{XY} \parallel \overline{AB}$; $NM = \frac{1}{2}AB$; $XY = \frac{1}{2}AB$ (Thm. 5-11) 2. $XYMN$ is a \square . (Thm. 5-5) 3. $\overline{NX} \parallel \overline{CH}$ (Thm. 5-11) 4. $\overline{NM} \perp \overline{NX}$ (Thm. 3-4) 5. $XYMN$ is a rect. (Thm. 5-16)

Chapter Review, Pages 416–417

1. Const. 1 3. Const. 3 5. Const. 5 7. Const. 7 9. \angle bis. 11. 1:2 13. Const. 9 15. Const. 10 17. Const. 13 19. a line \parallel to l and m and halfway between them 21. a plane \parallel to both planes and halfway between them 23. the int. of the \perp bis. of \overline{PQ} and $\odot P$ with radius 8 cm (2 pts.) 25. 0 pts., 1 pt., a \odot , a \odot and a pt., or 2 \odot s, dep. on the int. of 2 planes \parallel to Q and 1 m from Q and a sphere with ctr. Z and radius 2 m.