

Chapter Review, Pages 369–370

1. chord, secant 3. diam. 5. tan. 7. 10 9. 100 11. $\angle YPW$ 13. 120 15. In same \odot , \cong chords are equally distant from the center. 17. 50, 50 19. 105 21. 40 23. 9

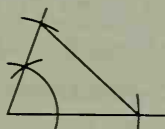
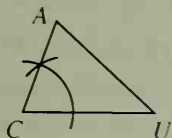
Cumulative Review, Pages 372–373

1. $3, 2x + 3$ 3. 1. \overline{MN} is median of trap. (Given) 2. $\overline{MN} \parallel \overline{ZY} \parallel \overline{WX}$ (Thm. 5-19) 3. V is the midpt. of \overline{WY} . (Thm. 5-10) 4. \overline{MN} bis. \overline{WY} . (Def. of bis.) 5. 7, $7\sqrt{3}$ 7. 9, 81, 90 9. $2\sqrt{2}$ 11. 1. $\angle 1 \cong \angle 2$, $\angle 2 \cong \angle 3$ (Given) 2. $\overline{AB} \parallel \overline{DC}$ (If alt. int. \triangleq , lines \parallel .) 3. $\overline{AD} \parallel \overline{BC}$ (If corr. \triangleq , lines \parallel .)
4. $ABCD$ is a \square . (Def. of \square) 5. $\overline{AB} \cong \overline{DC}$ (Opp. sides of a \square are \cong .) 13. a. If $\angle A \neq \angle C$, then quad. $ABCD$ is not a \square . b. If quad. $ABCD$ is not a \square , then $\angle A \neq \angle C$. 15. 20 17. a. inside b. on c. on
19. a. Janice likes to dance. b. no concl. c. no concl. d. Kim is not Bill's sister. 21. always
23. always 25. sometimes 27. 0, 1 29. 1. $AB > AC$ (Given) 2. $m\angle ACB > m\angle ABC$ (Thm. 6-2)
3. $BD = EC$ (Given) 4. $BC = BC$ (Reflex.) 5. $BE > CD$ (SAS Ineq. Thm.)

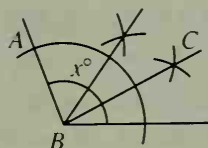
Chapter 10

Written Exercises, Pages 378–379

9.

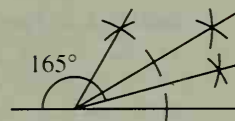


13.



$$m\angle ABC = \frac{3}{4}x$$

15. c. They are the same pt., which is equidistant from the sides of the \triangle .
19. Methods may vary; for example, see the figure at the right.



Mixed Review Exercises, Page 380

1. midpt. 2. \square 3. rect. 4. rhom. 5. $5\sqrt{2}$ 6. 108

Written Exercises, Pages 383–385

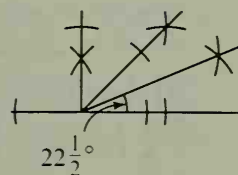
1. Const. 5 3. Const. 4 5. Const. 7 7. Extend \overrightarrow{HJ} ; use Const. 6.
11. Methods may vary; for example, see the figure at the right.

15. b, c. Yes; yes 19. Const. \overline{AB} so that $AB = a$. Const. the \perp bis. of

\overline{AB} int. \overline{AB} at M , so that $AM = \frac{1}{2}a$. Const. $\overline{MC} \perp \overline{AB}$ so that $MC = \frac{1}{2}a$.

With ctrs. A and C and radius AM , draw arcs int. at D . Draw \overline{AD} and \overline{CD} .

23. Const. a square with sides of length b .



Written Exercises, Pages 388–389

1. a. any acute \triangle b. any obt. \triangle c. any rt. \triangle 3. 2, 4 5. 3.8, 5.7 7. Const. 3 9. The pt. of int. of the \perp bis. of \overline{XY} , \overline{XZ} , and \overline{YZ} is equidistant from all 3 towns. It would be wiser to build it equidistant from X and Z , near Y . 11. a. $GD = \frac{1}{3} \cdot AD = \frac{1}{3} \cdot BE = GE$ b. GB c. $\angle GBA$, $\angle GED$, $\angle GDE$ 13. 3, -1

15. Key steps of proof: 1. Draw \overline{BD} int. \overline{AC} at Y . (Through any 2 pts. there is ex. 1 line.) 2. \overline{BM} and

\overline{CY} are medians of $\triangle BDC$. (Def. of median) 3. $CX = \frac{2}{3}CY$ (The medians of a \triangle int. in a pt. that is $\frac{2}{3}$ of the

- dist. from each vertex to the opp. side.) 4. $CX = \frac{2}{3} \cdot \frac{1}{2} \cdot AC = \frac{1}{3}AC$ (Subst.) 17. a. pts. in the interior of $\angle XPY$ b. pts. in the interior of the \angle vert. to $\angle XPY$