

19. Statements	Reasons
1. $\overline{PR} \parallel \overline{VO}; \overline{RO} \parallel \overline{PV}$	1. Given
2. $PROV$ is a \square .	2. Def. of \square
3. $\overline{PR} \cong \overline{RO}$	3. Given
4. $PROV$ is a rhombus.	4. If 2 consec. sides of a \square are \cong , then the \square is a rhombus.
5. $\overline{RE} \cong \overline{EV}$	5. The diags. of a \square bis. each other.
6. $\overline{EO} \cong \overline{EO}$	6. Refl. Prop.
7. $\overline{RO} \cong \overline{VO}$	7. Def. of rhombus
8. $\triangle ROE \cong \triangle VOE$	8. SSS Post.
9. $\overline{OE} \perp \overline{RV}$	9. The diags. of a rhombus are \perp .
10. $\angle VEO$ is a rt. \angle .	10. Def. of \perp lines
11. $\triangle VEO$ is a rt. \triangle .	11. Def. of rt. \triangle
12. $\angle 1$ and $\angle VOE$ are comp.	12. The acute \angle s of a rt. \triangle are comp.
13. $m\angle 1 + m\angle VOE = 90$	13. Def. of comp. \angle s
14. $\angle 2 \cong \angle VOE$ or $m\angle 2 = m\angle VOE$	14. Corr. parts of $\cong \triangle$ are \cong .
15. $m\angle 1 + m\angle 2 = 90$	15. Substitution Prop.
16. $\angle 1$ and $\angle 2$ are comp.	16. Def. of comp. \angle s

Pages 200–201 • CUMULATIVE REVIEW: CHAPTERS 1–5

- A**
- one 2. a. yes; skew lines b. no
 - If you enjoy winter weather, then you are a member of the skiing club.
 - 1 5. Trans. Prop.
 - 180; The sum of the meas. of the \angle s of a \triangle is 180. 7. 180; \angle Add. Post.
 - 5; The meas. of an ext. \angle of a \triangle equals the sum of the meas. of the 2 remote int. \angle s.
 - $\angle 1$; If 2 \parallel lines are cut by a trans., then corr. \angle s are \cong .
 - \overline{EB} ; If 2 \angle s of a \triangle are \cong , then the sides opp. those \angle s are \cong .
 - bisects; \perp 12. a. A and B b. \overline{SR} and \overline{ST}
 - a. $\triangle RTA$ b. \overline{DB} c. $m\angle E$ 14. $\frac{38(180)}{40} = 171$ 15. 150, 150
- B**
- $2x + 7 = 4x - 1; 2x = 8; x = 4; SU = 2(4) + 7 = 15; UN = 4(4) - 1 = 15; SN = 3(4) + 4 = 16$
 - $MN = \frac{1}{2}[(2r + s) + (4r - 3s)] = \frac{1}{2}(6r - 2s) = 3r - s$
 - median 19. bisector 20. isos.
 - $m\angle DAC + 2m\angle ADC = 180, 36 + 2m\angle ADC = 180, 2m\angle ADC = 144, m\angle ADC = 72; m\angle ADF = \frac{1}{2}(72) = 36$

24. In $\triangle VOZ$, $m\angle V = 180 - (90 + 30) = 60$, so $m\angle 1 = 180 - (90 + 60) = 30$;
 $\overline{OY} \cong \overline{YZ}$, so $m\angle 4 = m\angle Z = 30$; $m\angle 1 + m\angle 2 + m\angle 3 + m\angle 4 =$
 $30 + m\angle 2 + m\angle 3 + 30 = 90$, so $m\angle 2 + m\angle 3 = 30$, and since \overline{OX} bis. $\angle VOZ$,
 $m\angle 2 = m\angle 3 = 15$.
25. $m\angle 1 = m\angle 4 = k$; $m\angle 2 = m\angle 3 = 45 - k$
26. \square ; If both pairs of opp. sides of a quad. are \cong , then the quad. is a \square .
27. $\angle NOM$, $\angle LMO$, $\angle NMO$; Each diag. of a rhombus bisects 2 \sphericalangle s of the rhombus.
28. midpt., \overline{MN} ; A line that contains the midpt. of one side of a \triangle and is \parallel to another side passes through the midpt. of the third side.
29. PQ , ON ; The median of a trap. has a length equal to the average of the base lengths.

30. Statements

Reasons

1. $WP = ZP$; $PY = PX$	1. Given
2. $WP + PY = ZP + PX$	2. Add. Prop. of =
3. $WY = WP + PY$; $XZ = ZP + PX$	3. Seg. Add. Post.
4. $WY = XZ$ or $\overline{WY} \cong \overline{XZ}$	4. Substitution Prop.
5. $\angle PXY \cong \angle PYX$	5. Isos. \triangle Thm.
6. $\overline{XY} \cong \overline{XY}$	6. Refl. Prop.
7. $\triangle WXY \cong \triangle ZYX$	7. SAS Post.
8. $\angle WXY \cong \angle ZYX$	8. Corr. parts of $\cong \triangle$ are \cong .

31. Statements

Reasons

1. $\overline{AD} \cong \overline{BC}$; $\overline{AD} \parallel \overline{BC}$	1. Given
2. $ABCD$ is a \square .	2. If one pair of opp. sides of a quad. are both \cong and \parallel , then the quad. is a \square .
3. $\overline{DF} \cong \overline{BF}$	3. Diags. of a \square bis. each other.
4. $\angle DFG \cong \angle BFE$	4. Vert. \sphericalangle s are \cong .
5. $\overline{DC} \parallel \overline{AB}$	5. Def. of \square
6. $\angle CDB \cong \angle ABD$	6. If 2 \parallel lines are cut by a trans., then alt. int. \sphericalangle s are \cong .
7. $\triangle DFG \cong \triangle BFE$	7. ASA Post.
8. $\overline{EF} \cong \overline{FG}$	8. Corr. parts of $\cong \triangle$ are \cong .