

Cumulative Reviews

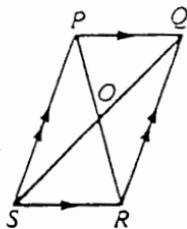
Chapters 1-4

Complete each statement.

- A
1. If Q is between P and R , then $PQ + \underline{\quad} = \underline{\quad}$.
 2. Four or more points lying in one plane are said to be $\underline{\quad}$.
 3. In $\triangle DEF$, the angle included between \overline{DF} and \overline{EF} is $\angle \underline{\quad}$.
 4. Two noncoplanar lines that do not intersect are said to be $\underline{\quad}$.
 5. If \overline{BE} bisects $\angle ABC$ then $\angle \underline{\quad} \cong \angle \underline{\quad}$.
 6. If point D lies between points A and C , then $\angle ADC$ is a(n) $\underline{\quad}$ angle.
 7. Two lines parallel to a third line are $\underline{\quad}$.
 8. One of two congruent adjacent supplementary angles is called a(n) $\underline{\quad}$ angle.
 9. If \overline{AB} and \overline{CD} bisect each other at X , then $\triangle AXC \cong \triangle \underline{\quad}$.
 10. A quadrilateral with exactly two parallel sides is called a(n) $\underline{\quad}$.
 11. If $m\angle A = 57$, what is the measure of the complement of A ?
 12. On a number line point A has coordinate -4 and point B has coordinate 8 .
 - a. Find the length of \overline{AB} .
 - b. Find the coordinate of the midpoint of \overline{AB} .
 13. If two angles of a triangle have measures 23 and 110 , what is the measure of the third angle?
 - ~~14.~~ Find the sum of the measures of the angles of a polygon with 11 sides.
 - ~~15.~~ If seven exterior angles of an octagon each have measure 42 , what is the measure of the eighth exterior angle?
 16. Consider the statement "All equilateral triangles have congruent sides."
 - a. Write the statement in the if-then form.
 - b. Write the converse of the statement.
 - c. Write the inverse of the statement.
 - d. Write the contrapositive of the statement.

Refer to the diagram at the right. Tell whether each statement must be true.

17. $\overline{PQ} \cong \overline{SR}$ and $\overline{PS} \cong \overline{QR}$.
18. $\angle S \cong \angle Q$.
19. $\angle P \cong \angle R$.
20. $\angle P$ and $\angle Q$ are supp. \triangle .
21. $\overline{PR} \perp \overline{SQ}$.
22. $\overline{SO} \cong \overline{OQ}$.
23. $\overline{PS} \cong \overline{SR}$.



24. Supply the reason.

Given: $\overline{ST} \perp \overline{RS}$; $\overline{ST} \perp \overline{UT}$; $\overline{RS} \cong \overline{UV}$

Prove: \overline{RV} and \overline{US} bisect each other.

Proof:

1. $\overline{ST} \perp \overline{RS}$; $\overline{ST} \perp \overline{UT}$

2. $\overline{RS} \parallel \overline{UT}$

3. $\angle 1 \cong \angle 4$

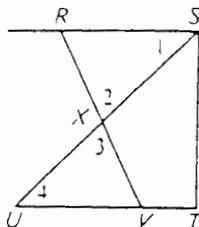
4. $\angle 2 \cong \angle 3$

5. $\overline{RS} \cong \overline{UV}$

6. $\triangle SXR \cong \triangle UXV$

7. $\overline{RX} \cong \overline{VX}$; $\overline{SX} \cong \overline{UX}$

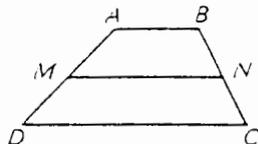
8. \overline{RS} and \overline{US} bisect each other.



\overline{MN} is the median of trapezoid $ABCD$.

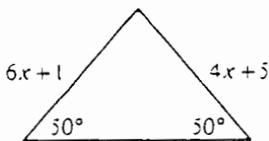
25. If $AM = 3$ and $BN = 2$, then $MD = \underline{\quad}$ and $NC = \underline{\quad}$.

26. If $AB = 10$ and $DC = 14$, then $MN = \underline{\quad}$.

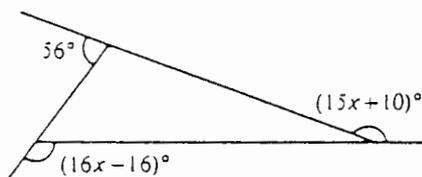


B Find the value of x .

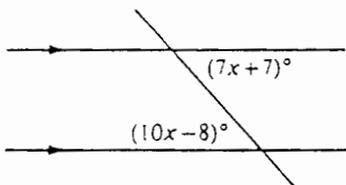
27.



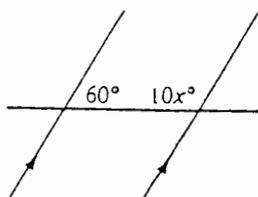
28.



29.



30.

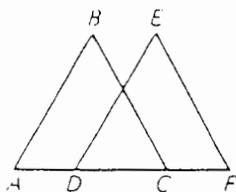


31. The lengths of two sides of a triangle are 10 and 13. The lengths of the third side must be greater than $\underline{\quad}$, but less than $\underline{\quad}$.

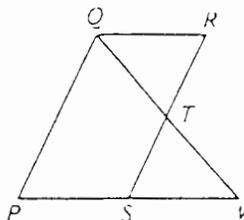
32. The supplement of an angle is five times as large as a complement of the angle. Find the measure of the angle.

33. If each interior angle of a regular polygon has measure 135, find the number of sides of the polygon.

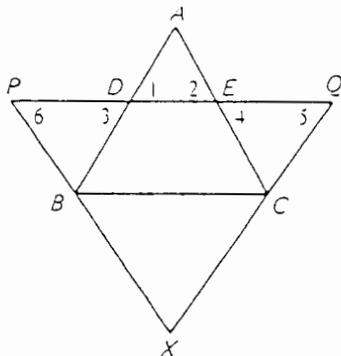
34. Given $\overline{AB} \parallel \overline{DE}$, $\overline{BC} \parallel \overline{EF}$, $\overline{AD} \cong \overline{CF}$
 Prove: $\angle B \cong \angle E$



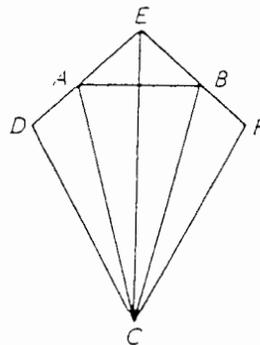
35. Given $\triangle QRT \cong \triangle VST$, S is the midpoint of \overline{PV}
 Prove: Quadrilateral $PQRS$ is a parallelogram.



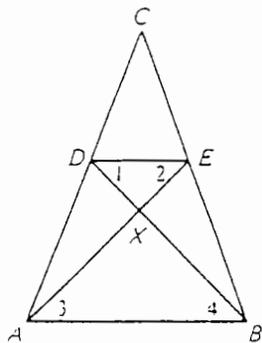
36. Given: $\overline{AD} \cong \overline{AE}$, $\overline{PX} \cong \overline{QX}$, $\overline{PD} \cong \overline{EQ}$
 Prove: $\overline{BD} \cong \overline{CE}$



37. Given: $\overline{DC} \cong \overline{FC}$, $\overline{DE} \cong \overline{FE}$, $\overline{DA} \cong \overline{FB}$
 Prove: $\triangle DAC \cong \triangle FBC$



38. Given: $\angle 1 \cong \angle 2$, $\angle 3 \cong \angle 4$
 Prove: $\overline{CA} \cong \overline{CB}$



39. Given: $\angle A \cong \angle B$, $\overline{AC} \cong \overline{BC}$, $\overline{ED} \cong \overline{FD}$
 Prove: $\overline{CD} \perp \overline{EF}$

