

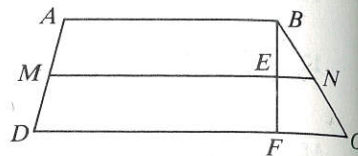
Chapter Test

Tell whether the statement is *always*, *sometimes*, or *never* true.

1. A square is ? a rectangle.
2. A rectangle is ? a rhombus.
3. A rhombus is ? a square.
4. A rhombus is ? a parallelogram.
5. A trapezoid ? has three congruent sides.
6. The diagonals of a trapezoid ? bisect each other.
7. The sides of a triangle are ? 13 cm, 19 cm, and 33 cm long.
8. In $\square ABCD$, if $m\angle A > m\angle B$, then $\angle D$ is ? an acute angle.

Trapezoid $ABCD$ has median \overline{MN} .

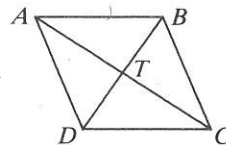
9. If $DC = 17$ and $MN = 12$, then $AB = \underline{?}$.
10. If $FC = 9$, then $EN = \underline{?}$.
11. If $AB = 5j + 7k$ and $DC = 9j - 3k$, then $MN = \underline{?}$.



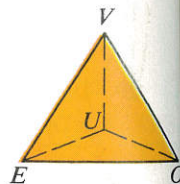
12. If the sides of a triangle have lengths x , 8, and 12, then $\underline{?} < x < \underline{?}$.
13. To write an indirect proof of "If $RS = 10$, then quad. $RSTU$ is a parallelogram," you begin by writing: "Assume temporarily that ?."

State the theorem that enables you to deduce, from the information given, that quad. $ABCD$ is a parallelogram.

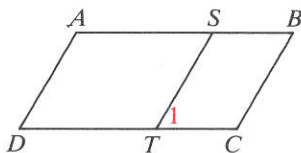
14. $\angle ADC \cong \angle CBA$ and $\angle BAD \cong \angle DCB$
15. $\overline{AD} \parallel \overline{BC}$ and $\overline{AD} \cong \overline{BC}$
16. $AT = CT$ and $DT = \frac{1}{2}DB$
17. \overline{AB} , \overline{BC} , \overline{CD} , and \overline{DA} are all congruent.



18. If $VE > VU$, then $m\angle \underline{?} > m\angle \underline{?}$.
19. If $m\angle EOU > m\angle EUO$, then $\underline{?} > \underline{?}$.
20. If $\overline{VE} \cong \overline{VO}$ and $m\angle UVE > m\angle UVO$, then $\underline{?} > \underline{?}$.
21. If $m\angle EVU = 60$, $\overline{OE} \cong \overline{OU}$, and $m\angle VOE > m\angle VOU$, then the largest angle of $\triangle UVE$ is $\angle \underline{?}$.



22. Given: $\square ABCD$; $\angle D \cong \angle 1$
Prove: Quad. $ASTD$ is a parallelogram.



23. Given: \overline{EM} is a median of $\triangle EFG$;
 $m\angle 2 > m\angle 3$
Prove: $m\angle G > m\angle F$

