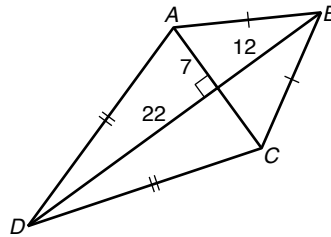


LESSON **6-6** **Problem Solving**
Properties of Kites and Trapezoids

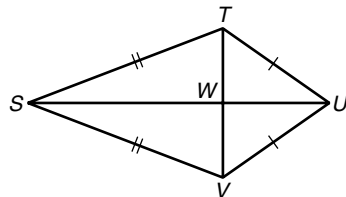
Use the figure of the kite for Exercises 1 and 2.

1. What is AD to the nearest tenth?

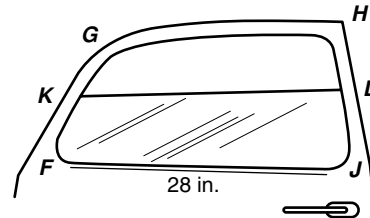
2. What is the perimeter of the kite to the nearest tenth?



3. In kite $STUV$, $m\angle TUW = 35^\circ$ and $m\angle WSV = 21^\circ$. What is the measure of $\angle UVS$?



4. A car window is in the shape of a trapezoid. When the window is halfway down, the top is \overline{KL} , the midsegment of $FGHJ$. If $KL = 23$ inches, what is GH ?

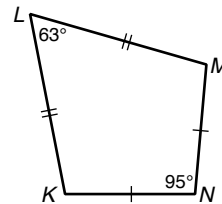


Choose the best answer.

5. Trapezoid $PQRS$ has base angles that measure $(9r + 21)^\circ$ and $(15r - 21)^\circ$. Find the value of r so that $PQRS$ is isosceles.

- A 3
- B 5
- C 7
- D 14

6. In kite $KLMN$, find the measure of $\angle M$.



- F 100.5°
- G 101°
- H 122°
- J 130°

7. In the design, eight isosceles trapezoids surround a regular octagon. What is the measure of $\angle B$ in trapezoid $ABCD$?

- A 35°
- B 45°
- C 55°
- D 65°

