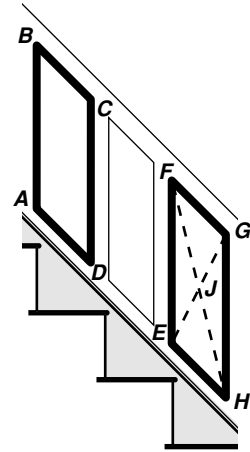


LESSON
6-2 **Problem Solving**
Properties of Parallelograms

Use the diagram for Exercises 1 and 2.

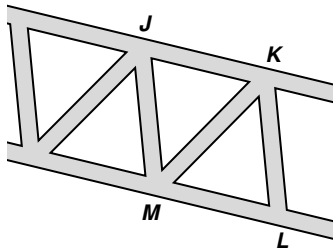
The wall frames on the staircase wall form parallelograms $ABCD$ and $EFGH$.



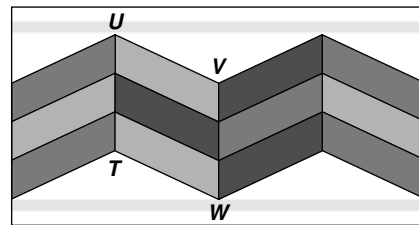
1. In $\square ABCD$, the measure of $\angle A$ is three times the measure of $\angle B$. What are the measures of $\angle C$ and $\angle D$?

2. In $\square EFGH$, $FH = 5x$ inches, $EG = (2x + 4)$ inches, and $JG = 8$ inches. What is the length of JH ?

3. The diagram shows a section of the support structure of a roller coaster. In $\square JKLM$, $JK = (3z - 0.9)$ feet, and $LM = (z + 2.7)$ feet. Find JK .



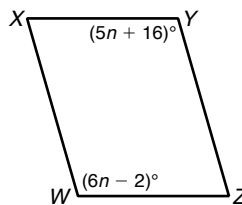
4. In $\square TUVW$, part of a ceramic tile pattern, $m\angle TUV = (8x + 1)^\circ$ and $m\angle UVW = (12x + 19)^\circ$. Find $m\angle TUV$.



Choose the best answer.

5. What is the measure of $\angle Z$ in parallelogram $WXYZ$?

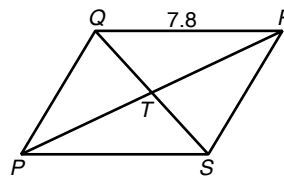
- A 18°
 B 74°
 C 106°
 D 108°



6. The perimeter of $\square CDEF$ is 54 centimeters. Find the length of \overline{FC} if \overline{DE} is 5 centimeters longer than \overline{EF} .

- F 11 cm
 G 14 cm
 H 16 cm
 J 44 cm

7. In $\square PQRS$, $QT = 7x$, $TS = 2x + 2.5$, $RT = 2y$, and $TP = y + 3$. Find the perimeter of $\triangle PTS$.



- A 6
 B 9.5
 C 12
 D 17.3