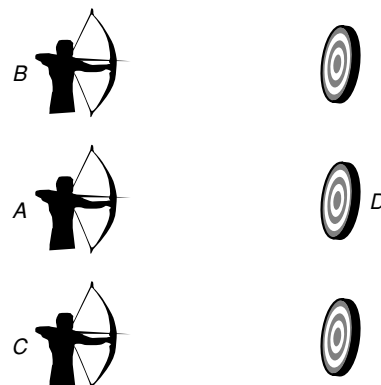


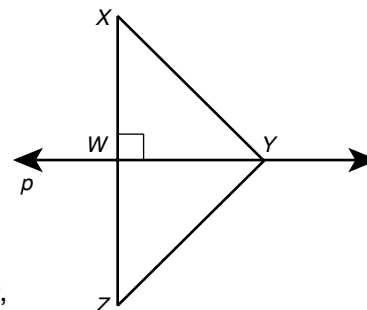
LESSON **Practice B**
5-1 **Perpendicular and Angle Bisectors**

Diana is in an archery competition. She stands at *A*, and the target is at *D*. Her competitors stand at *B* and *C*.



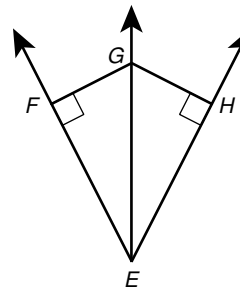
- The distance from each of her competitors to her target is equal. Explain whether the flight path of Diana's arrow, \overline{AD} , must be a perpendicular bisector of \overline{BC} .

Use the figure for Exercises 2–5.



- Given that line p is the perpendicular bisector of \overline{XZ} and $XY = 15.5$, find ZY . _____
- Given that $XZ = 38$, $YX = 27$, and $YZ = 27$, find ZW . _____
- Given that line p is the perpendicular bisector of \overline{XZ} ; $XY = 4n$, and $YZ = 14$, find n . _____
- Given that $XY = ZY$, $WX = 6x - 1$, and $XZ = 10x + 16$, find ZW . _____

Use the figure for Exercises 6–9.



- Given that $FG = HG$ and $m\angle FEH = 55^\circ$, find $m\angle GEH$. _____
- Given that \overrightarrow{EG} bisects $\angle FEH$ and $GF = \sqrt{2}$, find GH . _____
- Given that $\angle FEG \cong \angle GEH$, $FG = 10z - 30$, and $HG = 7z + 6$, find FG . _____
- Given that $GF = GH$, $m\angle GEF = \frac{8}{3} a^\circ$, and $m\angle GEH = 24^\circ$, find a . _____

Write an equation in point-slope form for the perpendicular bisector of the segment with the given endpoints.

10. $L(4, 0)$, $M(-2, 3)$

11. $T(0, -3)$, $U(0, 1)$

12. $A(-1, 6)$, $B(-3, -4)$
