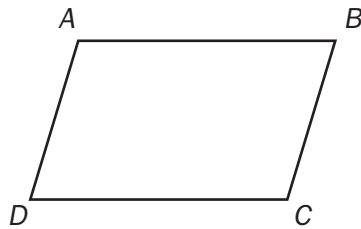## SAMPLE ITEMS

1. **Which information is needed to show that a parallelogram is a rectangle?**
   A. The diagonals bisect each other.
   B. The diagonals are congruent.
   C. The diagonals are congruent and perpendicular.
   D. The diagonals bisect each other and are perpendicular.

**Correct Answer:** B

2. **Look at quadrilateral *ABCD*.**



   **Which information is needed to show that quadrilateral *ABCD* is a parallelogram?**

   A. Use the distance formula to show that diagonals *AC* and *BD* have the same length.
   B. Use the slope formula to show that segments *AB* and *CD* are perpendicular and segments *AD* and *BC* are perpendicular.
   C. Use the slope formula to show that segments *AB* and *CD* have the same slope and segments *AD* and *BC* have the same slope.
   D. Use the distance formula to show that segments *AB* and *AD* have the same length and segments *CD* and *BC* have the same length.

**Correct Answer:** C

3. **Consider the construction of the angle bisector shown.**
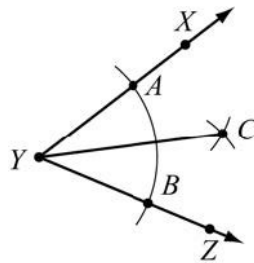


**Which could have been the first step in creating this construction?**

**A.** Place the compass point on point *A* and draw an arc inside ∠*Y*.

**B.** Place the compass point on point *B* and draw an arc inside ∠*Y*.

**C.** Place the compass point on vertex *Y* and draw an arc that intersects $\overline{YX}$ and $\overline{YZ}$.

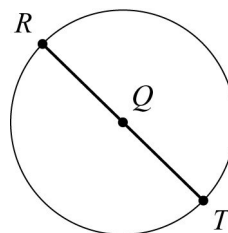**D.** Place the compass point on vertex *Y* and draw an arc that intersects point *C*.

**Correct Answer:** C

4. **Consider the beginning of a construction of a square inscribed in circle *Q*.**
   **Step 1:** Label point *R* on circle *Q*.

   **Step 2:** Draw a diameter through *R* and *Q*.

   **Step 3:** Label the point where the diameter intersects the circle as point *T*.



**What is the next step in this construction?**

**A.** Draw radius $\overline{SQ}$.

**B.** Label point *S* on circle *Q*.

**C.** Construct a line segment parallel to $\overline{RT}$.

**D.** Construct the perpendicular bisector of $\overline{RT}$.

**Correct Answer:** D