1. What type of construction is illustrated in the figure?

A. The bisector of a given angle.
B. An angle congruent to a given angle.
C. A line segment congruent to a given line segment.
D. A line segment perpendicular to a given line segment.

2. Which statement describes the construction being illustrated on the rectangle shown?

A. A bisector of \( \overline{AB} \)
B. A line segment congruent to \( \overline{AB} \)
C. A perpendicular to \( \overline{AB} \) through point E on \( \overline{AB} \)
D. A perpendicular to \( \overline{AB} \) through point G not on \( \overline{AB} \)

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 \( \angle Y \).
B. Place the compass point on point B and draw an arc inside \( \angle Y \).
C. Place the compass point on vertex Y and draw an arc that intersects YX and YZ.
D. Place the compass point on vertex Y and draw an arc that intersects point C.

4. Andy has to bisect \( \overline{TW} \).

He plans to swing equal arcs from T and W above and below \( \overline{TW} \). Which is an appropriate compass setting for the arc the student swings?

A. \( \frac{1}{5} \overline{TW} \)
B. \( \frac{1}{3} \overline{TW} \)
C. \( \frac{2}{5} \overline{TW} \)
D. \( \frac{3}{4} \overline{TW} \)

5. The figure below shows the construction of the perpendicular bisector of \( \overline{AB} \) using a compass. Which of the following statements must always be true in the construction of the perpendicular bisector?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>( AC = BC )</td>
<td></td>
</tr>
<tr>
<td>( AB = CD )</td>
<td></td>
</tr>
<tr>
<td>( AE = EB )</td>
<td></td>
</tr>
<tr>
<td>( EC = ED )</td>
<td></td>
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</tbody>
</table>
Mini Assessment # 5

Use the information provided to answer questions 1 and 2.
The figure shows line r, points P and T on line r, and point Q not on line r. Also shown is ray PQ.
1. Consider the partial construction of a line parallel to \( r \) through point Q shown below. What would be the final step in the construction?

A. draw a line through P and S
B. draw a line through Q and S
C. draw a line through T and S
D. draw a line through W and S

2. Once the construction illustrated in question 1 is complete, which of the reasons listed contribute to proving the validity of the construction?
A. When two lines are cut by a transversal and the corresponding angles are congruent, the lines are parallel.
B. When two lines are cut by a transversal and the vertical angles are congruent, the lines are parallel.
C. Definition of segment bisector
D. Definition of an angle bisector

3. What is the first step to copy \( \overline{AB} \) onto the line shown here?

A. Use a straightedge to draw \( \overline{AB} \) so it intersects the other line.
B. Open a compass to distance AB.
C. Use a ruler to measure AB.
D. Use a straightedge to draw \( \overline{AC} \).

4. Which figure best represents the construction of a line segment congruent to a given segment?

A. 
B. 
C. 
D. 

5. \( \angle XYZ \) is shown here. Which constructions can be made using a compass and straightedge?

I. An angle whose measure is \( \frac{1}{9} \angle XYZ \)
II. An angle whose measure is \( \frac{1}{8} \angle XYZ \)
III. An angle whose measure is \( \frac{1}{6} \angle XYZ \)
IV. An angle whose measure is \( \frac{1}{4} \angle XYZ \)
V. An angle whose measure is \( \frac{1}{3} \angle XYZ \)
VI. An angle whose measure is \( \frac{1}{2} \angle XYZ \)

A. I, II, III
B. IV, V, VI
C. I, III, V
D. II, IV, VI