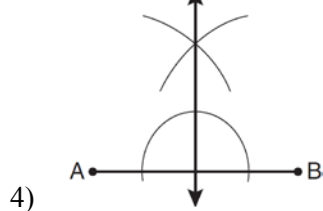
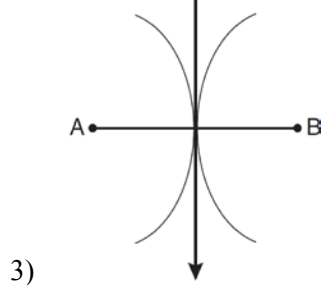
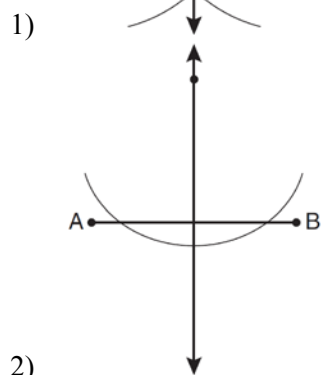
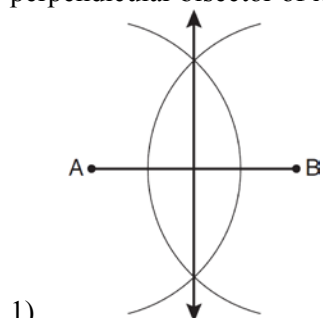
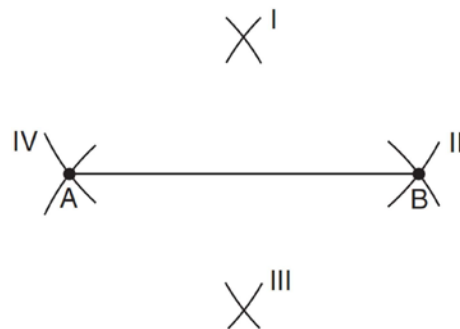


G.G.18: Constructions: Construct the perpendicular bisector of a given segment, using a straightedge and compass, and justify the construction

- 1 Which diagram shows the construction of the perpendicular bisector of \overline{AB} ?



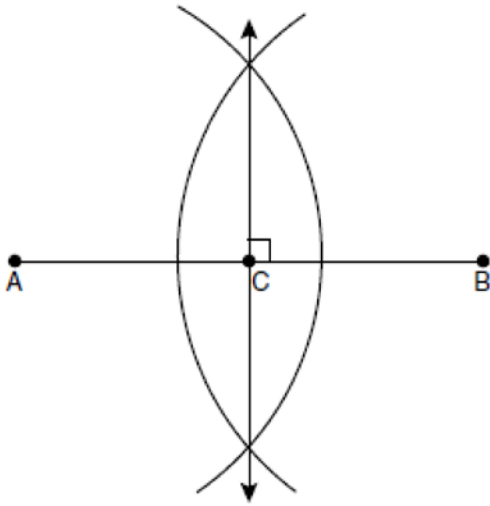
- 2 Line segment AB is shown in the diagram below.



Which two sets of construction marks, labeled I, II, III, and IV, are part of the construction of the perpendicular bisector of line segment AB ?

- 1) I and II
 - 2) I and III
 - 3) II and III
 - 4) II and IV
- 3 One step in a construction uses the endpoints of \overline{AB} to create arcs with the same radii. The arcs intersect above and below the segment. What is the relationship of \overline{AB} and the line connecting the points of intersection of these arcs?
- 1) collinear
 - 2) congruent
 - 3) parallel
 - 4) perpendicular

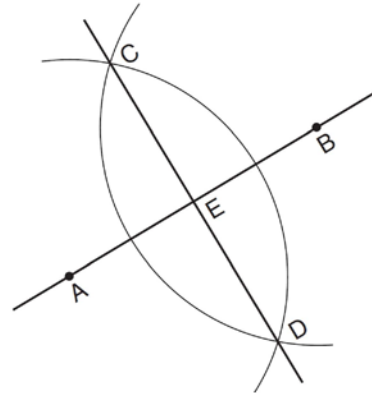
- 4 The diagram below shows the construction of the perpendicular bisector of \overline{AB} .



Which statement is *not* true?

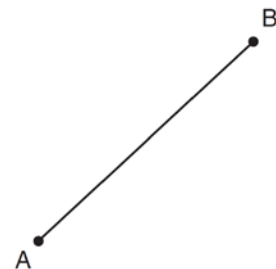
- 1) $AC = CB$
- 2) $CB = \frac{1}{2} AB$
- 3) $AC = 2AB$
- 4) $AC + CB = AB$

- 5 Based on the construction below, which conclusion is *not* always true?



- 1) $\overline{AB} \perp \overline{CD}$
- 2) $AB = CD$
- 3) $AE = EB$
- 4) $CE = DE$

- 6 Using a compass and straightedge, construct the perpendicular bisector of \overline{AB} . [Leave all construction marks.]



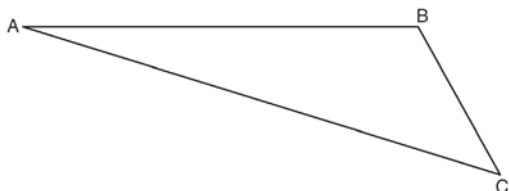
- 7 Using only a compass and a straightedge, construct the perpendicular bisector of \overline{AB} and label it c . [Leave all construction marks.]



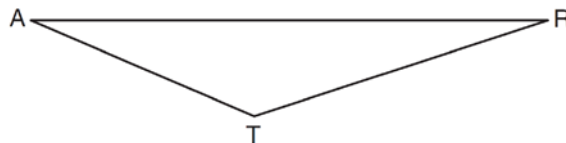
- 8 Using a compass and straightedge, construct the perpendicular bisector of \overline{AB} shown below. Show all construction marks.



- 9 On the diagram of $\triangle ABC$ shown below, use a compass and straightedge to construct the perpendicular bisector of \overline{AC} . [Leave all construction marks.]



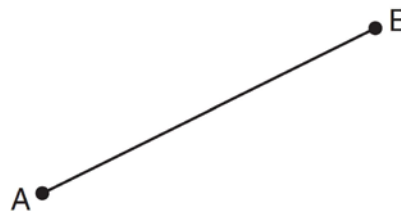
- 10 Using a compass and straightedge, construct the perpendicular bisector of side \overline{AR} in $\triangle ART$ shown below. [Leave all construction marks.]



- 11 Use a compass and straightedge to divide line segment \overline{AB} below into four congruent parts. [Leave all construction marks.]



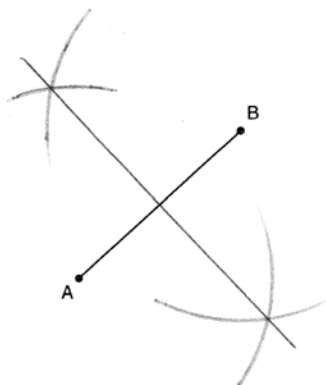
- 12 Using a compass and straightedge, locate the midpoint of \overline{AB} by construction. [Leave all construction marks.]



G.G.18: Constructions: Construct the perpendicular bisector of a given segment, using a straightedge and compass, and justify the construction

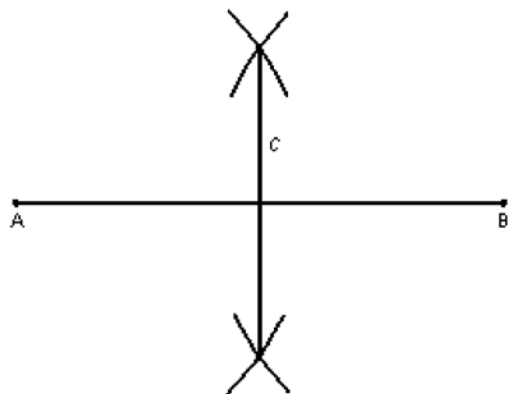
Answer Section

- 1 ANS: 1 REF: 011120ge
2 ANS: 2 REF: 061101ge
3 ANS: 4 REF: 081005ge
4 ANS: 3 REF: fall0804ge
5 ANS: 2 REF: 061305ge
6 ANS:



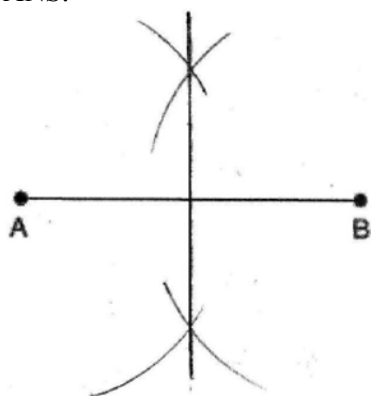
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- 7 ANS:



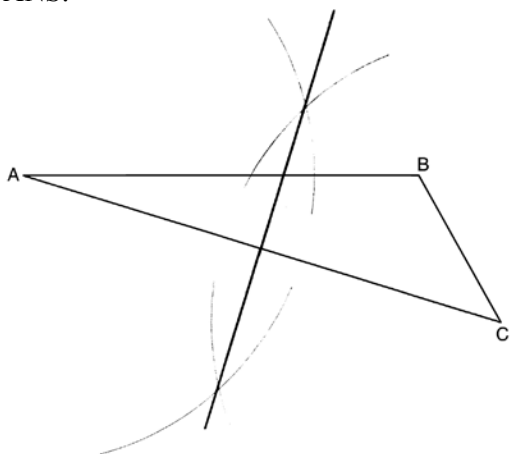
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8 ANS:



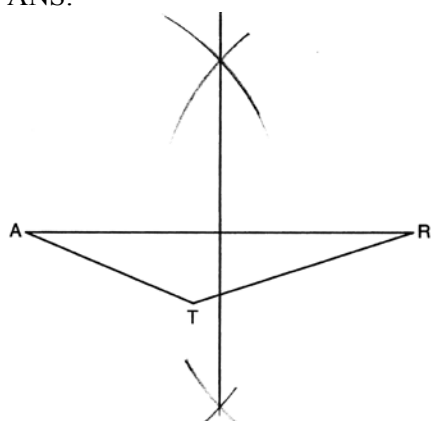
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9 ANS:



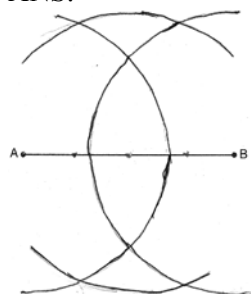
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10 ANS:



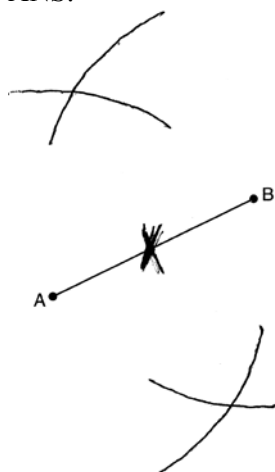
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11 ANS:



REF: 081437ge

12 ANS:



REF: 061532ge