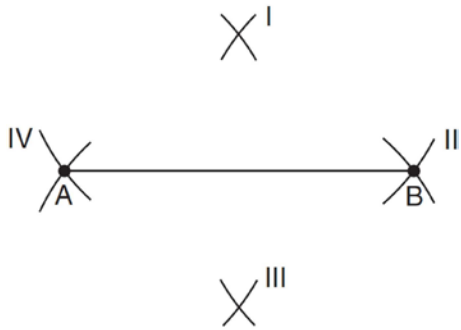


G.CO.D.12: Constructions 2

- 1 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

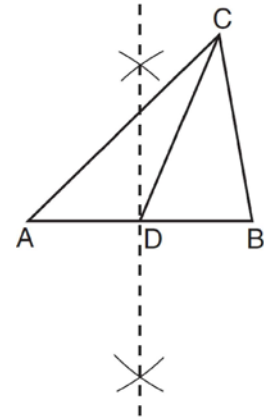
- 2 Line segment AB is shown in the diagram below.



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

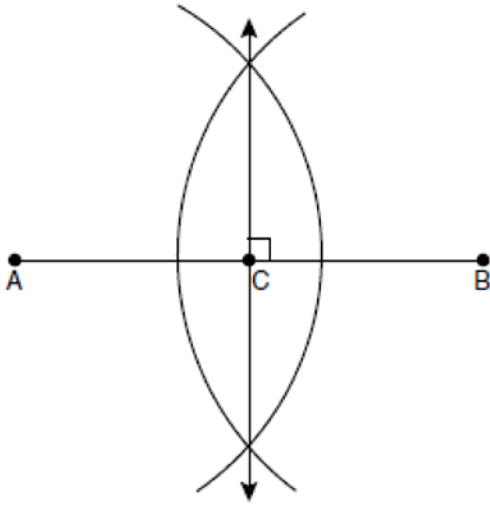
- 3 In the construction shown below, \overline{CD} is drawn.



In $\triangle ABC$, \overline{CD} is the

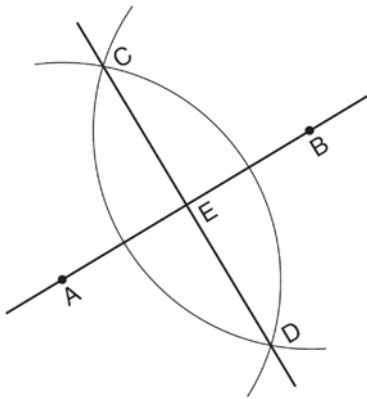
- 1) perpendicular bisector of side \overline{AB}
- 2) median to side \overline{AB}
- 3) altitude to side \overline{AB}
- 4) bisector of $\angle ACB$

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



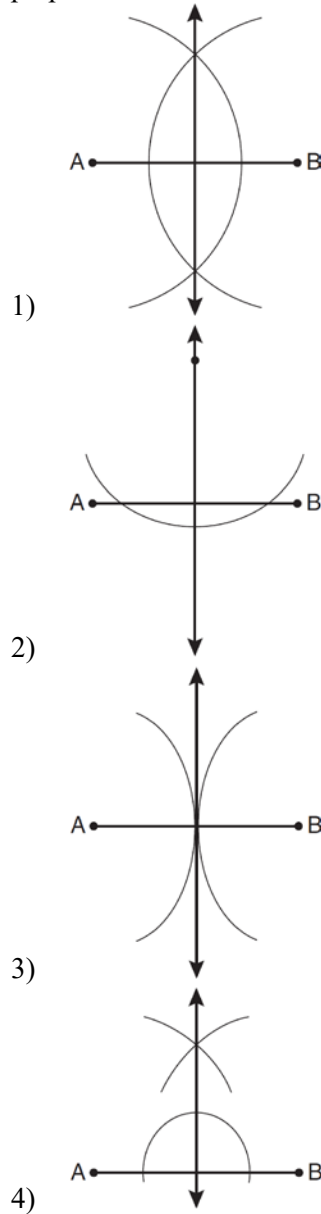
Which statement is *not* true?

- 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?

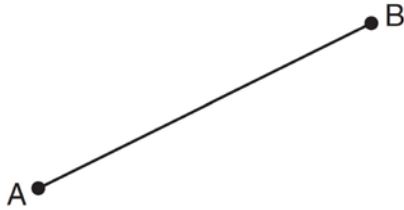


- 1) $\overline{AB} \perp \overline{CD}$
- 2) $AB = CD$
- 3) $AE = EB$
- 4) $CE = DE$

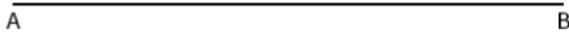
- 6 Which diagram shows the construction of the perpendicular bisector of \overline{AB} ?



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



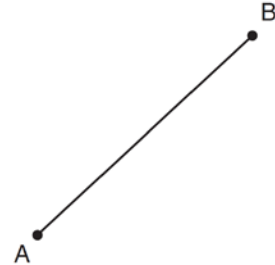
- 8 Given \overline{AB} below, use a compass and a straightedge to construct a segment that is $\frac{1}{4}AB$. [Leave all construction marks.]



- 9 Use a compass and straightedge to divide line segment AB below into four congruent parts. [Leave all construction marks.]



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



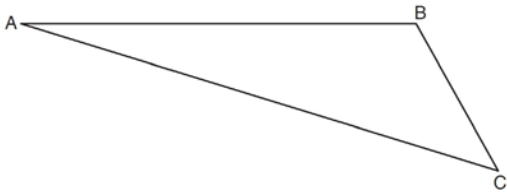
- 11 Using only a compass and a straightedge, construct the perpendicular bisector of \overline{AB} and label it c . [Leave all construction marks.]



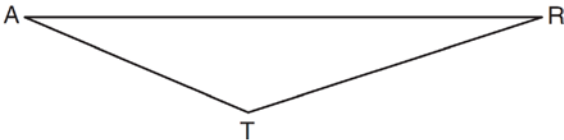
- 12 Using a compass and straightedge, construct the perpendicular bisector of \overline{AB} shown below. Show all construction marks.



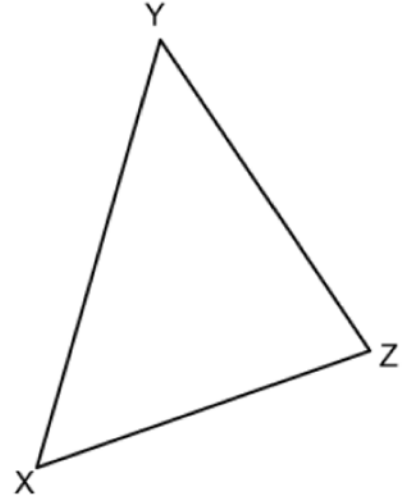
- 13 On the diagram of $\triangle ABC$ shown below, use a compass and straightedge to construct the perpendicular bisector of \overline{AC} . [Leave all construction marks.]



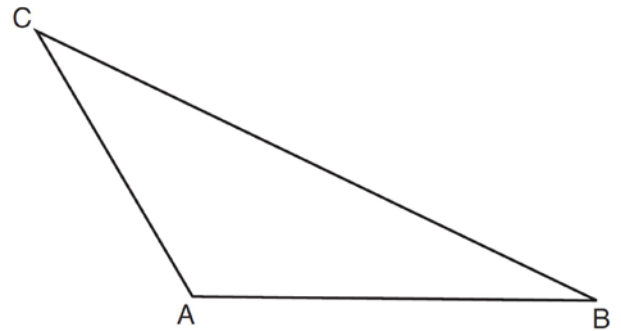
- 14 Using a compass and straightedge, construct the perpendicular bisector of side \overline{AR} in $\triangle ART$ shown below. [Leave all construction marks.]



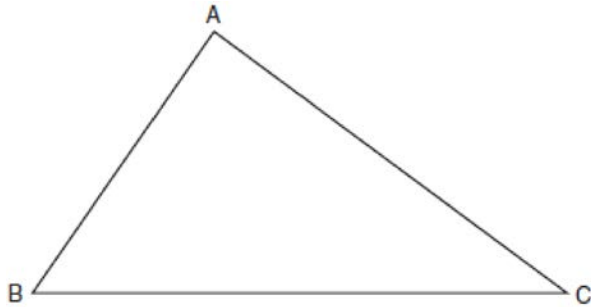
- 15 Triangle XYZ is shown below. Using a compass and straightedge, construct the circumcenter of $\triangle XYZ$.



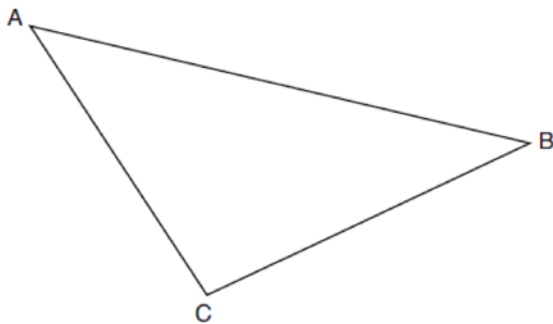
- 16 In the diagram of $\triangle ABC$ shown below, use a compass and straightedge to construct the median to \overline{AB} . [Leave all construction marks.]



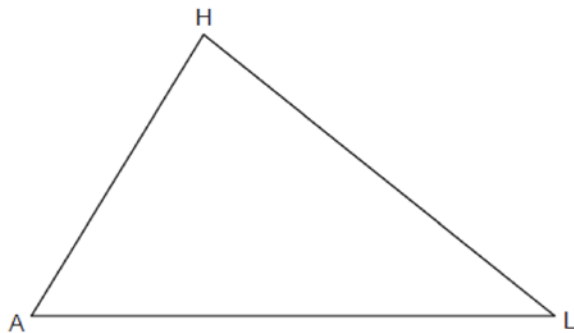
- 17 On the accompanying diagram of $\triangle ABC$, use a compass and a straightedge to construct a median from A to \overline{BC} .



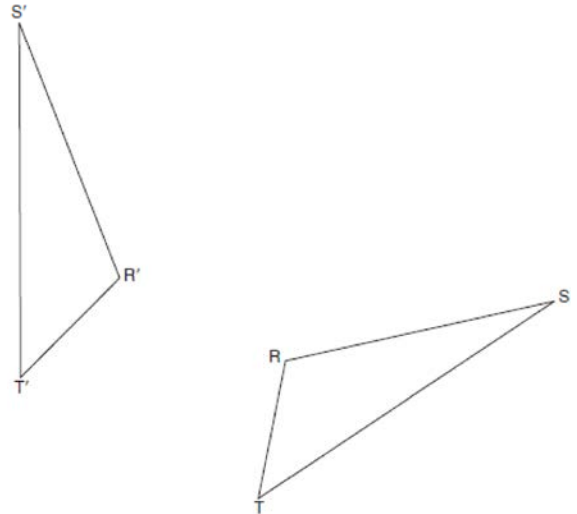
- 18 Using a compass and straightedge, construct the median to side AC in $\triangle ABC$ below. [Leave all construction marks.]



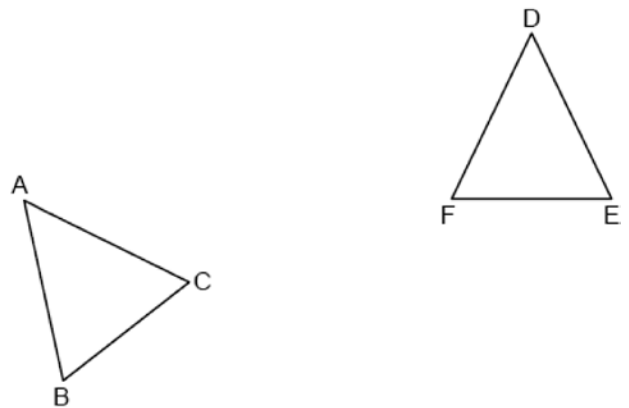
- 19 Using a compass and straightedge, construct a midsegment of $\triangle AHL$ below. [Leave all construction marks.]



- 20 Using a compass and straightedge, construct the line of reflection over which triangle RST reflects onto triangle $R'S'T'$. [Leave all construction marks.]



- 21 Using a compass and straightedge, construct the line of reflection that maps $\triangle ABC$ onto its image, $\triangle DEF$. [Leave all construction marks.]



G.CO.D.12: Constructions 2 Answer Section

- 1 ANS: 4 REF: 081005ge
- 2 ANS: 2 REF: 061101ge
- 3 ANS: 2 REF: 011628ge
- 4 ANS: 3 REF: fall0804ge
- 5 ANS: 2 REF: 061305ge
- 6 ANS: 1 REF: 011120ge
- 7 ANS:



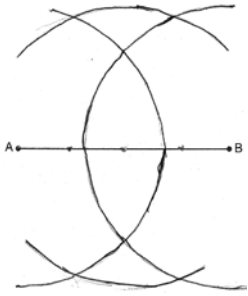
REF: 061532ge

- 8 ANS:



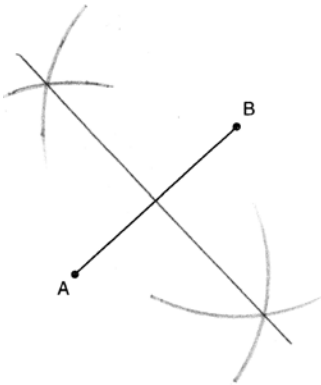
REF: 012526geo

9 ANS:



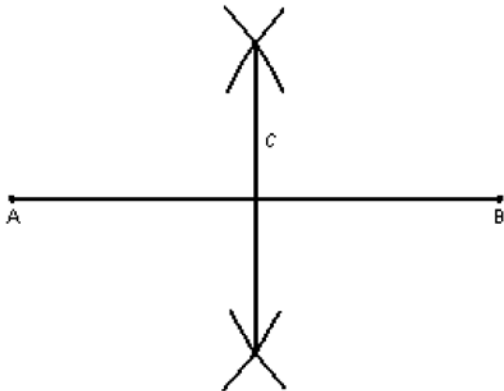
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10 ANS:



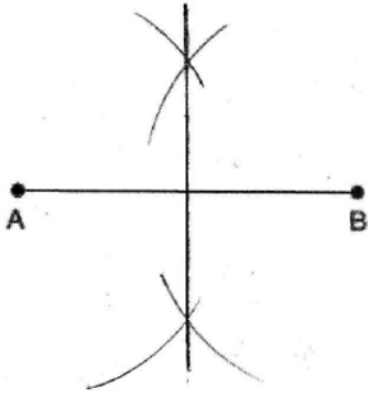
REF: 011430ge

11 ANS:



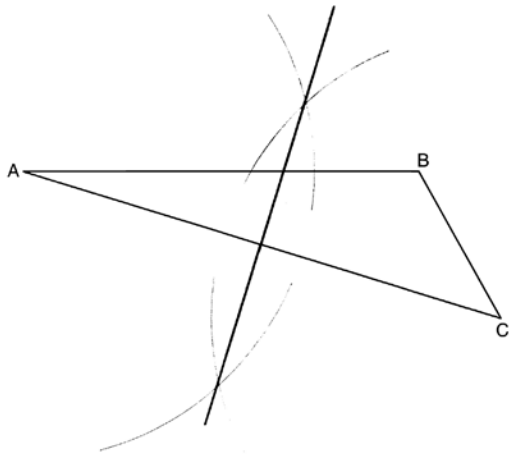
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12 ANS:



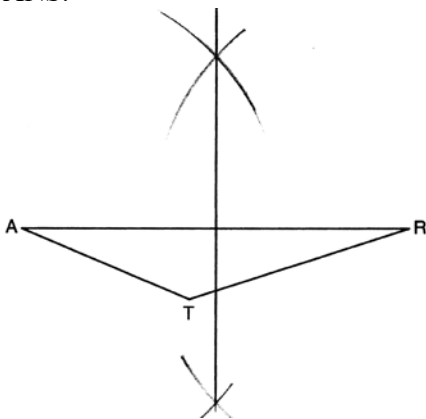
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13 ANS:



REF: 081130ge

14 ANS:



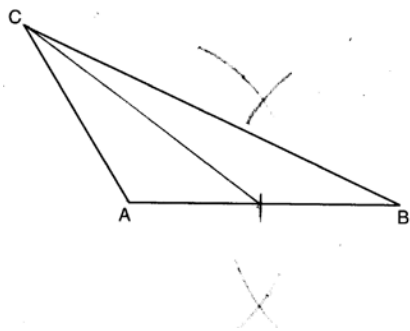
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15 ANS:



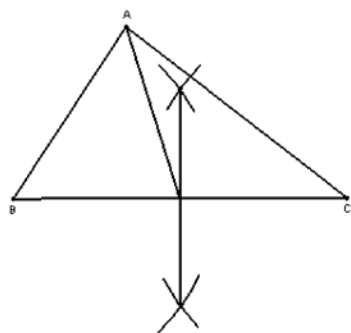
REF: spr2406geo

16 ANS:



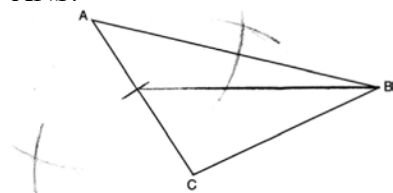
REF: 081628geo

17 ANS:



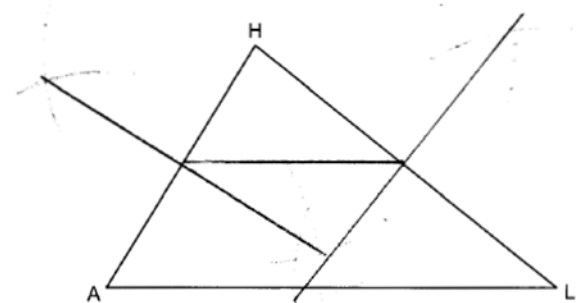
REF: 060325a

18 ANS:



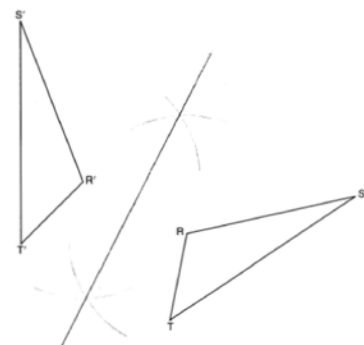
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19 ANS:



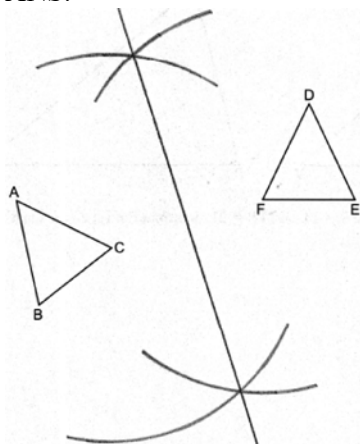
REF: 082329geo

20 ANS:



REF: 011725geo

21 ANS:



REF: 082426geo