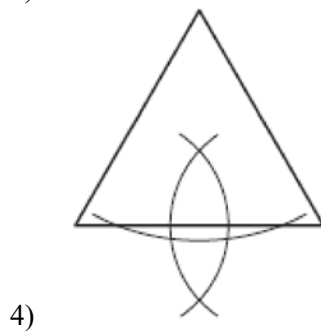
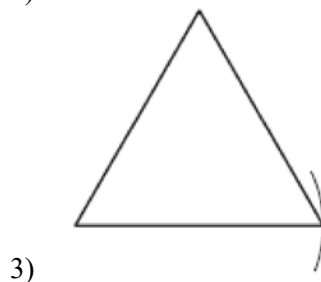
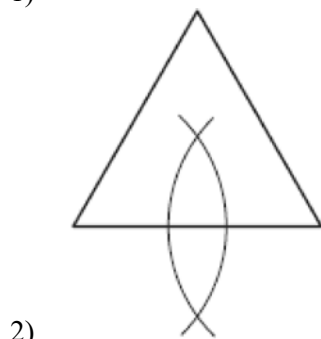
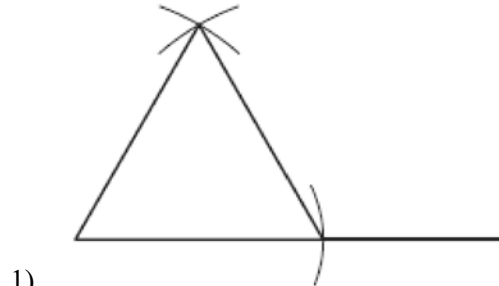
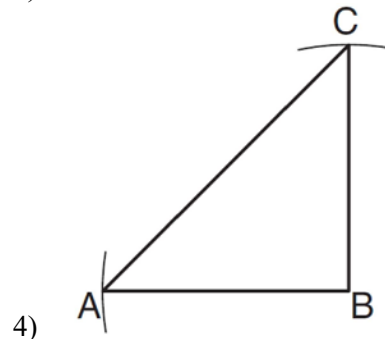
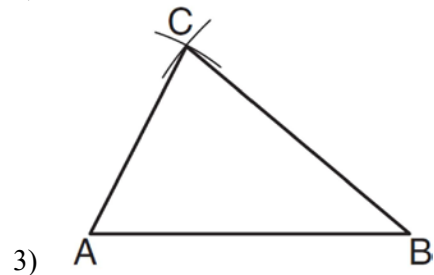
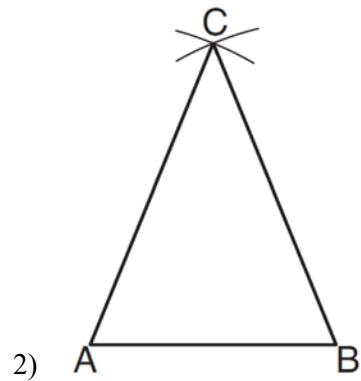
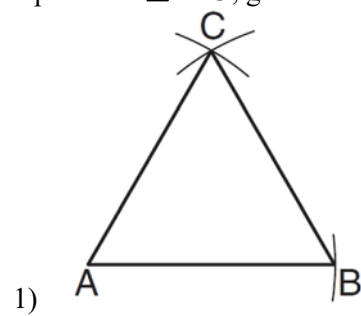


**G.G.20: Constructions: Construct an equilateral triangle, using a straightedge and compass, and justify the construction**

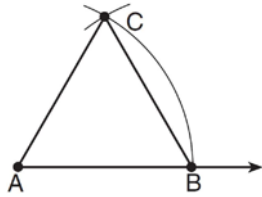
- 1 Which diagram shows the construction of an equilateral triangle?



- 2 Which diagram represents a correct construction of equilateral  $\triangle ABC$ , given side  $\overline{AB}$ ?



- 3 The diagram below shows the construction of an equilateral triangle.



Which statement justifies this construction?

- 1)  $\angle A + \angle B + \angle C = 180$
  - 2)  $m\angle A = m\angle B = m\angle C$
  - 3)  $AB = AC = BC$
  - 4)  $AB + BC > AC$
- 4 On the line segment below, use a compass and straightedge to construct equilateral triangle  $ABC$ .  
[Leave all construction marks.]



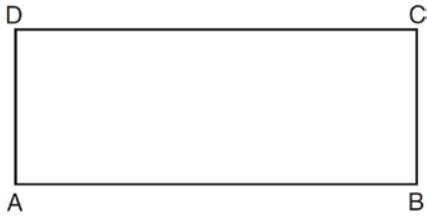
- 5 Using a compass and straightedge, and  $\overline{AB}$  below, construct an equilateral triangle with all sides congruent to  $\overline{AB}$ . [Leave all construction marks.]



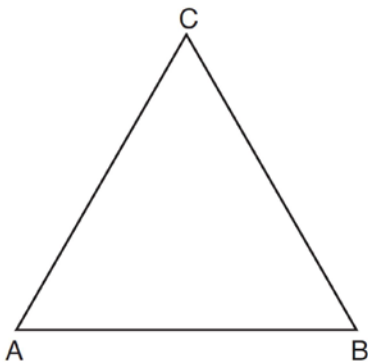
- 6 Using a compass and straightedge, on the diagram below of  $\overleftrightarrow{RS}$ , construct an equilateral triangle with  $\overline{RS}$  as one side. [Leave all construction marks.]



- 7 On the ray drawn below, using a compass and straightedge, construct an equilateral triangle with a vertex at  $R$ . The length of a side of the triangle must be equal to a length of the diagonal of rectangle  $ABCD$ .



- 8 In the diagram below,  $\triangle ABC$  is equilateral.



Using a compass and straightedge, construct a new equilateral triangle congruent to  $\triangle ABC$  in the space below. [Leave all construction marks.]

**G.G.20: Constructions: Construct an equilateral triangle, using a straightedge and compass, and justify the construction**

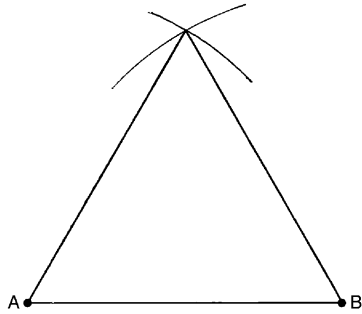
**Answer Section**

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2 ANS: 1 REF: 011207ge

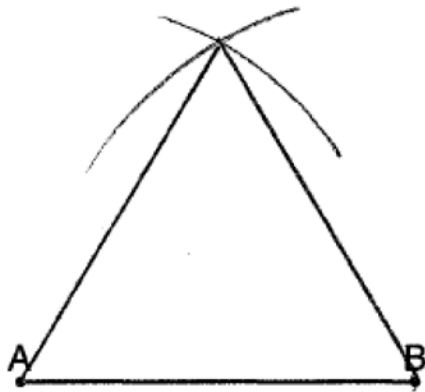
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4 ANS:



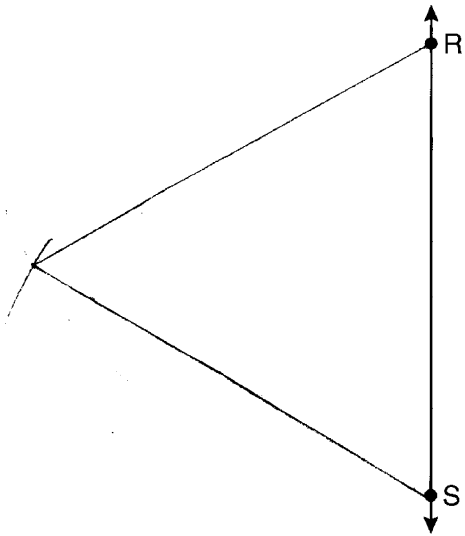
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5 ANS:



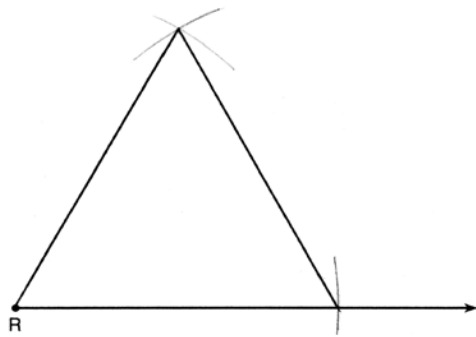
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6 ANS:



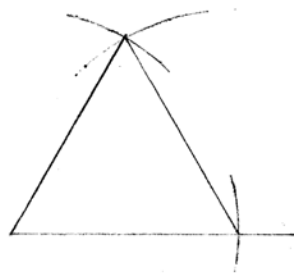
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7 ANS:



REF: 061332ge

8 ANS:



REF: 081532ge