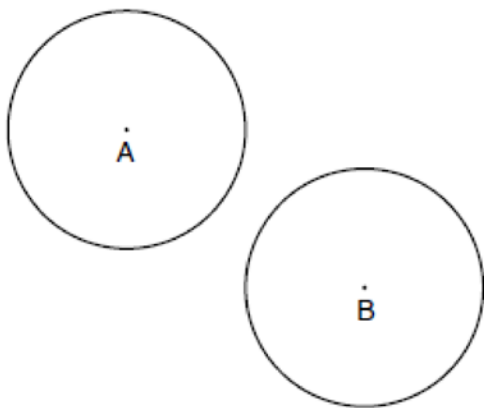


**G.G.50: Tangents 3: Investigate, justify, and apply theorems about tangent lines to a circle:
common tangents of two non-intersecting or tangent circles**

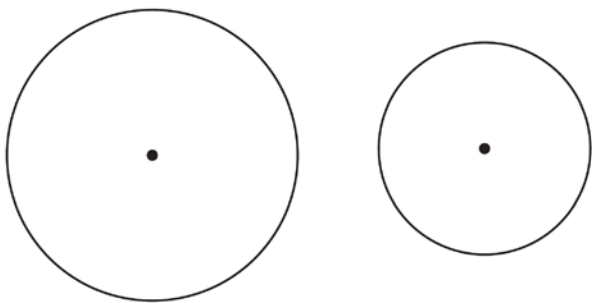
- 1 In the diagram below, circle A and circle B are shown.



What is the total number of lines of tangency that are common to circle A and circle B ?

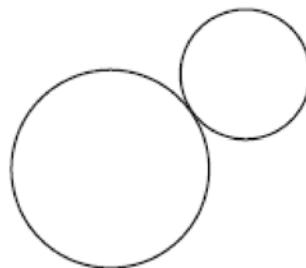
- 1) 1
- 2) 2
- 3) 3
- 4) 4

- 2 How many common tangent lines can be drawn to the circles shown below?



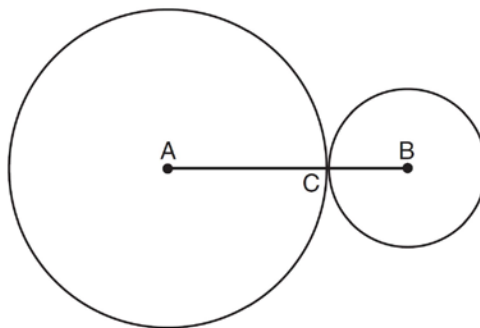
- 1) 1
- 2) 2
- 3) 3
- 4) 4

- 3 How many common tangent lines can be drawn to the two externally tangent circles shown below?

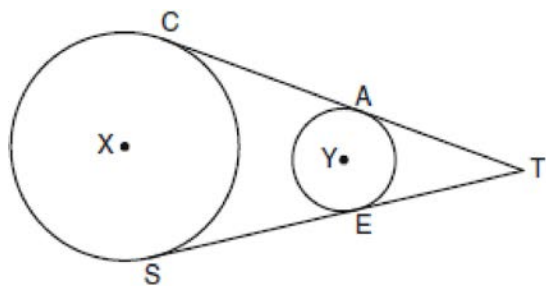


- 1) 1
- 2) 2
- 3) 3
- 4) 4

- 4 In the diagram below, circles A and B are tangent at point C and \overline{AB} is drawn. Sketch all common tangent lines.



- 5 In the diagram below, circles X and Y have two tangents drawn to them from external point T . The points of tangency are C , A , S , and E . The ratio of TA to AC is $1:3$. If $TS = 24$, find the length of SE .



(Not drawn to scale)

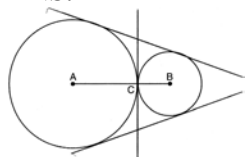
**G.G.50: Tangents 3: Investigate, justify, and apply theorems about tangent lines to a circle:
common tangents of two non-intersecting or tangent circles
Answer Section**

1 ANS: 4 REF: fall0824ge

2 ANS: 4 REF: 011428ge

3 ANS: 3 REF: 080928ge

4 ANS:



REF: 011330ge

5 ANS:
18

REF: 060935ge