

Circles - Class XI

Related Questions with Solutions

Questions

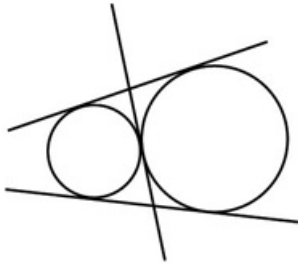
Question: 01

The number of common tangents to the circles $x^2 + y^2 - 4x - 6y - 12 = 0$ and $x^2 + y^2 + 6x + 18y + 26 = 0$, is

- A. 3
- B. 4
- C. 1
- D. 2

Solutions

Solution: 01



The circles can be written as $[x - 2]^2 + [y - 3]^2 = 25$ with centre $O_1[2, 3]$ and $r_1 = 5$ and $[x + 3]^2 + [y + 9]^2 = 64$ with centre $O_2[-3, -9]$ and $r_2 = 8$

$O_1O_2 =$ distance between centres $= \sqrt{5^2 + 12^2} = 13$

As $r_1 + r_2 = O_1O_2$

We have that circle touch each other externally, so there are three common tangents as shown.

Correct Options

Answer:01

Correct Options: A