Related Questions with Solutions

Questions

Quetion: 01

The number of common tangent(s) to the circles $x^2 + y^2 + 2x + 8y - 23 = 0$ and $x^2 + y^2 - 4x - 10y + 19 = 0$ is

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Solutions

Solution: 01

$C_1 = (-1, -4); C_2 = (2, 5);$
$r_1 = \sqrt{1 + 16 + 23} = 2\sqrt{10}; r_2 = \sqrt{4 + 25 - 19} = \sqrt{10}$
$C_1 C_2 = \sqrt{9 + 81} = 3\sqrt{10} = r_1 + r_2$
So both circles touch each other externally.
So, there are 3 common tangents.

Correct Options

Answer:01

Correct Answer: 3