

Questions with Answer Keys

MathonGo

Q1 (25 July 2021 Shift 2)

Let the equation of the pair of lines, $y = px$ and $y = qx$, can be written as $(y - px)(y - qx) = 0$

Then the equation of the pair of the angle bisectors of the lines $x^2 - 4xy - 5y^2 = 0$ is:

(1) $x^2 - 3xy + y^2 = 0$

(2) $x^2 + 4xy - y^2 = 0$

(3) $x^2 + 3xy - y^2 = 0$

(4) $x^2 - 3xy - y^2 = 0$

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Questions with Answer Keys**MathonGo****Answer Key**

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Q1 (3) mathongo mathongo mathongo mathongo mathongo mathongo mathongo

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Pair of Lines

JEE Main 2021 (July) Chapter-wise Questions

Hints and Solutions

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$$\frac{x^2 - y^2}{1 - (-5)} = \frac{xy}{-2}$$
$$\frac{x^2 - y^2}{6} = \frac{xy}{-2}$$
$$\Rightarrow x^2 - y^2 = -3xy$$

$\Rightarrow x^2 + 3xy - y^2 = 0$ mathongo mathongo mathongo mathongo mathongo mathongo

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