

TMA00

Hefin Rhys (J4342909)

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Question

Exercise booklet 2, exercise 1d: Determine whether the point (2,-1) satisfies the following equation:

$$y^2 = x^2 + x - 7$$

Solution

To find if the point (2,-1) satisfies the equation, I substitute these values into the equation as x and y , respectively, and determine if the left and right hand sides are equal.

$$\begin{aligned}\text{LHS} &= y^2 \\ &= (-1)^2 \\ &= 1\end{aligned}$$

$$\begin{aligned}\text{RHS} &= x^2 + x - 7 \\ &= 2^2 + 2 - 7 \\ &= -1\end{aligned}$$

As the $\text{LHS} \neq \text{RHS}$, the point (2,-1) does not satisfy the equation.