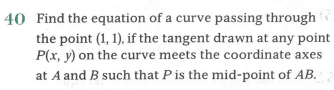
**Expert ID/Name: Nstructive**

**Date: 09-Nov-2020**

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**Answer:**

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| **Section 1:** Algorithm/Theorem Reminder / A tip for solving these type of questions. |

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| Tips:  1. Form the differential equation by using given condition.  2. Apply the integration on both sides.  3. Substitute the point in the solution of differential equation. |

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| Section 2: Step-by-step answer. |
| Given: A curve which is passing through the point  To find: Equation of the curve passing through the point on the curve, and a tangent drawn at a point on the curve meets the coordinate axes at A and B such that P is mid-point of AB.  Explanation: -  Step 1:   |  |  | | --- | --- | | Instruction | Form the coordinates of A, B by using the given codition. | | Calculation | Let the coordinates of the point  be .  P is the mid-point of line segment AB.  So the coordinates of the points A and B are respectively.  C:\Users\chari\Desktop\40a.PNG |   Step2:   |  |  | | --- | --- | | Instruction | Form the differential equation and apply the integration on both sides hence find its general solution. | | Calculation | Slope of  is a tangent to the curve at . |   Step3:   |  |  | | --- | --- | | Instruction | Substitute the point in. | | Calculation | Given curve passing through the point      Which is the required equation of given differential equation. |   Conclusion: - Particular solution of differential equation  is .  Hence, verified. |