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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. The differential equation can be solved using the substitution  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | it cannot be solved using a substitution |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 2. The differential equation can be solved using the substitution  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 3. The differential equation has the solution  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | |

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| 4. The differential equation has the solution  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 5. An integrating factor for the linear differential equation is  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | *x*  ​ | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 6. An integrating factor for the linear differential equation is  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. | 0 | |  | b. | 1 | |  | c. | *x*  ​ | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 7. The differential equation can be solved using the substitution  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | it cannot be solved using a substitution |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 8. The differential equation can be solved using the substitution  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 9. The solution of the differential equation is  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 10. The differential equation has the solution  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | |

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| 11. The differential equation has the solution  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | |