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| 1. Determine whether the value of *x* = 0 is a solution of the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Yes | |  | b. | No |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.7 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 9/18/2014 9:13 AM | |

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| 2. Determine whether the value of *x* = –1 is a solution of the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | No | |  | b. | Yes |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.8 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 9/18/2014 9:15 AM | |

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| 3. Determine whether the value of *x* = –2 is a solution of the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Yes | |  | b. | No |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.10 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 9/18/2014 9:36 AM | |

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| 4. Determine whether the value of *x* = 1 is a solution of the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | No | |  | b. | Yes |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.12 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 9/18/2014 9:44 AM | |

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| 5. Determine whether the value of *x* = 5 is a solution of the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | No | |  | b. | Yes |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.13 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 9/18/2014 9:49 AM | |

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| 6. Determine whether the value of *x* = 12 is a solution of the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | No | |  | b. | Yes |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.14 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 9/18/2014 9:51 AM | |

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| 7. Determine whether the value of *x* = 9 is a solution of the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | No | |  | b. | Yes |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.15 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 9/18/2014 9:52 AM | |

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| 8. Determine whether the equation –6(*x* + 3) = –6*x*  - 18 is an identity or a conditional equation. If conditional, indicate the condition.  ​   |  |  |  | | --- | --- | --- | |  | a. | conditional with *x* = –3 satisfying the equation | |  | b. | conditional with *x* = 0 satisfying the equation | |  | c. | identity | |  | d. | conditional with *x* = 3 satisfying the equation | |  | e. | conditional with no solution |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.19 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:00 AM | |

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| 9. Determine whether the equation 2(*x* - 1) = 2*x* + 3 is an identity or a conditional equation. If conditional, indicate the condition.  ​   |  |  |  | | --- | --- | --- | |  | a. | conditional with *x* = 0 satisfying the equation | |  | b. | conditional with  satisfying the equation | |  | c. | identity | |  | d. | conditional with no solution | |  | e. | conditional with  satisfying the equation |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.21 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 5:54 AM | |

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| 10. Determine whether the equation 6(*x* + 5) - 9*x* = 6*x* + 5 is an identity or a conditional equation. If conditional, indicate the condition.  ​   |  |  |  | | --- | --- | --- | |  | a. | conditional with  satisfying the equation | |  | b. | conditional with x = 0 satisfying the equation | |  | c. | conditional with  satisfying the equation | |  | d. | conditional with no solution | |  | e. | identity |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.24 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 9/19/2014 3:26 AM | |

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| 11. Justify each step of the solution.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Original equation.  Divide each side by 8.  Simplify.  Subtract 64 from each side.  Simplify. | |  | b. | Original equation.  Subtract 64 from each side.  Simplify.  Divide each side by 8.  Simplify. | |  | c. | Simplify.  Original equation.  Subtract 64 from each side.  Divide each side by 8.  Simplify. | |  | d. | Original equation.  Subtract 64 from each side.  Divide each side by 8.  Simplify.  Simplify. | |  | e. | Original equation.  Simplify.  Subtract 64 from each side.  Divide each side by 8.  Simplify. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.31 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 9/19/2014 3:59 AM | |

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| 12. Justify each step of the solution.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Original equation.  Simplify.  Simplify.  Add 70 to each side.  Remove parentheses.  Divide each side by 9.  Simplify. | |  | b. | Original equation.  Remove parentheses.  Add 70 to each side.  Divide each side by 9.  Simplify.  Simplify.  Simplify. | |  | c. | Original equation.  Remove parentheses.  Simplify.  Add 70 to each side.  Simplify.  Divide each side by 9.  Simplify. | |  | d. | Original equation.  Divide each side by 9.  Simplify.  Add 70 to each side.  Simplify.  Remove parentheses.  Simplify. | |  | e. | Simplify.  Original equation.  Remove parentheses.  Add 70 to each side.  Simplify.  Divide each side by 9.  Simplify. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.32 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:05 AM | |

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| 13. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x* = 4  ​ | |  | b. | *x* = 5  ​ | |  | c. | *x* = 21  ​ | |  | d. | *x* = 22  ​ | |  | e. | *x* = 20  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.33 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:08 AM | |

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| 14. Solve the equation.  ​  –1 - 8*x* = 2  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.34 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:10 AM | |

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| 15. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*3 | |  | b. | *x =*–5 | |  | c. | *x =*–2 | |  | d. | *x =*1 | |  | e. | *x =*–4 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.35 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:12 AM | |

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| 16. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *y =* | |  | b. | *y =*​ | |  | c. | ​*y =*​ | |  | d. | *y =*​ | |  | e. | *y =*​ |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.40 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:16 AM | |

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| 17. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *​x =*6 | |  | b. | *x =*​–11 | |  | c. | ​*x =*–6 | |  | d. | *x =*​11 | |  | e. | No solution |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.41 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:17 AM | |

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| 18. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*8 | |  | b. | *x =*​57 | |  | c. | ​*x =*–8 | |  | d. | ​*x =*–​57 | |  | e. | All real numbers |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.42 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:18 AM | |

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| 19. Solve the equation.  ​  –7(*x* + 9) + 9 = 6(*x* + 6)  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.43 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:21 AM | |

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| 20. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *​x =*8 | |  | b. | *x =*8 | |  | c. | *x =*16 | |  | d. | ​*x =*12 | |  | e. | ​*x =*96 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.44 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:24 AM | |

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| 21. Solve the equation.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.45 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:45 AM | |

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| 22. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *​x =*5 | |  | b. | *x =*3 | |  | c. | ​*x =*6 | |  | d. | *x =*8 | |  | e. | *x =*7 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.46 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:45 AM | |

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| 23. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*3 | |  | b. | *x =*2 | |  | c. | *x =*1 | |  | d. | *x =*4 | |  | e. | *x =*–2 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.47 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:46 AM | |

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| 24. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*3 | |  | b. | *x =*2.25 | |  | c. | *x =*9 | |  | d. | *x =*4.5 | |  | e. | *x =*1.125 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.48 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:47 AM | |

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| 25. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*9 | |  | b. | ​*x =*10 | |  | c. | ​*x =*8 | |  | d. | *x =*6 | |  | e. | *x =*7 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.50 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:48 AM | |

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| 26. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *​x =*4 | |  | b. | *x =*​5 | |  | c. | ​*x =*6 | |  | d. | ​*x =*7 | |  | e. | ​*x =*3 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.51 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:56 AM | |

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| 27. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *​x =*​9 | |  | b. | *x =*​​8 | |  | c. | ​*x =*​–8 | |  | d. | ​*x =*​–9 | |  | e. | No solution. |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.53 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:58 AM | |

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| 28. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | ​*x =*​9 | |  | b. | ​*x =*​5 | |  | c. | ​*x =*​8 | |  | d. | ​*x =*​20 | |  | e. | No solution. |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.54 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 6:59 AM | |

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| 29. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.55 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:00 AM | |

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| 30. Solve the equation.  ​    ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.56 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:02 AM | |

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| 31. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *​x =*4 | |  | b. | *x =*9 | |  | c. | ​*x =*20 | |  | d. | ​*x =*16 | |  | e. | ​*x =*36 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.57 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:03 AM | |

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| 32. Solve the equation.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*8 | |  | b. | *x =* | |  | c. | *x =* | |  | d. | ​*x =*12 | |  | e. | ​*x =*23 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.60 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:05 AM | |

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| 33. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*8 | |  | b. | *x =*​–2 | |  | c. | ​*x =*–15 | |  | d. | ​*x =*11 | |  | e. | No solution. |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.63 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:07 AM | |

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| 34. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*8 | |  | b. | ​*x =*4 | |  | c. | ​*x =* | |  | d. | ​*x =*10 | |  | e. | No solution. |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.65 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:10 AM | |

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| 35. Solve the equation.     |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.66 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:20 AM | |

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| 36. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*16 | |  | b. | ​*x =*17 | |  | c. | ​*x =*15 | |  | d. | ​*x =*18 | |  | e. | ​*x =*19 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.67 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:21 AM | |

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| 37. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*11 | |  | b. | *x =*2 | |  | c. | ​*x =*6 | |  | d. | ​*x =*5 | |  | e. | No solution. |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.70 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:22 AM | |

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| 38. Solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*5 | |  | b. | ​*x =*6 | |  | c. | ​*x =*11 | |  | d. | *x =*0 | |  | e. | No solution. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.71 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:22 AM | |

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| 39. Solve the equation.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.72 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:24 AM | |

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| 40. Use a graphing utility to graph the equation and approximate any -intercepts.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​  ​*x* = –5 | b. | *x* = 6 | |  | c. | ​  *x* = 4 | d. | ​  *x* = –6 | |  | e. | ​  ​*x* = –4 |  |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.75 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:30 AM | |

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| 41. Use a graphing utility to graph the equation and approximate any *x*-intercepts.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​  ​ | |  | c. | ​  ​ | d. | ​  ​ | |  | e. | ​  ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.77 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:40 AM | |

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| 42. Use a graphing utility to graph the equation and approximate any *x*-intercepts.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​  ​ | |  | c. | ​  ​ | d. | ​  ​ | |  | e. | ​  ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.78 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:46 AM | |

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| 43. Find the *x*- and *y*-intercepts of the graph of the equation algebraically.  ​   |  |  |  | | --- | --- | --- | |  | a. | *x*-intercept: (1, 0)  *y*-intercept: (0, –3) | |  | b. | *x*-intercept: (2, 0)  *y*-intercept: (0, –3) | |  | c. | *x*-intercept: (-2, 0)  *y*-intercept: (0, –3) | |  | d. | *x*-intercept: (2, 0)  *y*-intercept: (0, –1) | |  | e. | *x*-intercept: (1, 0)  *y*-intercept: (0, –1) |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.84 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:46 AM | |

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| 44. A student states that the equation  ​  ​  is an identity. Describe and correct student’s error.  ​   |  |  |  | | --- | --- | --- | |  | a. | The negative sign was not distributed to the *x*. | |  | b. | The negative sign was not distributed to the 4*x*. | |  | c. | The negative sign was not distributed to the 6. | |  | d. | The negative sign was not distributed to the –4. | |  | e. | The negative sign was not distributed to the –24. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.92 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 11/14/2014 5:40 AM | |

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| 45. Solve the equation for *x*. (Round your answer to three decimal places.)  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *​x =*0.72 | |  | b. | ​*x =*0.26 | |  | c. | ​*x =*280 | |  | d. | ​*x =*189.565 | |  | e. | ​*x =*0.46 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.93 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:58 AM | |

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| 46. Solve the equation for *x*. (Round your answer to three decimal places.)  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =*–0.543 | |  | b. | ​*x =*12.618 | |  | c. | *x =*–12.618 | |  | d. | ​*x =*0.543 | |  | e. | ​*x =*23.236 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.96 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 7:59 AM | |

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| 47. Solve the equation for *x*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x =* | |  | b. | ​*x =* | |  | c. | ​*x =* | |  | d. | ​*x =* | |  | e. | ​*x =* |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.97 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 8:00 AM | |

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| 48. Solve the equation for *x*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | ​*​x =* | |  | b. | *x =*​ | |  | c. | ​*x =* | |  | d. | ​*x =* | |  | e. | ​*x =* |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.100 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 8:01 AM | |

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| 49. If  and , then the surface area *S* of the rectangular solid in the figure is . Find the length of the box if the surface area is 232 square centimeters.  ​   |  |  |  | | --- | --- | --- | |  | a. | cm | |  | b. | cm | |  | c. | cm | |  | d. | cm | |  | e. | cm |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.106 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 11/14/2014 7:36 AM | |

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| 50. Complete the table and use it to find the interval in which the solution of the equation  is located. Explain your reasoning.  ​  ​   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | -1 | 0 | 1 | 2 | 3 | 4 | |  |  |  |  |  |  |  |   ​  ​  ​   -1   0    1    2    3    4  –9.2–5.8–2.414.4  7.8    ​   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | -1 | 0 | 1 | 2 | 3 | 4 |  | |  | –9.2 | –5.8 | –2.4 | 1 | 4.4 | 7.8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | ​   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | -1 | 0 | 1 | 2 | 3 | 4 | |  | –9.2 | –5.8 | –2.4 | 1 | 4.4 | 7.8 |   ​ The expression changes from negative to positive in this interval. | |  | b. | ​   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | -1 | 0 | 1 | 2 | 3 | 4 | |  | 9.2 | 5.8 | 2.4 | 1 | 4.4 | 7.8 |   ​ The expression changes from negative to positive in this interval. | |  | c. | ​   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | -1 | 0 | 1 | 2 | 3 | 4 | |  | 9.2 | –5.8 | –2.4 | 1 | 4.4 | 7.8 |   ​ The expression changes from negative to positive in this interval. | |  | d. | ​   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | -1 | 0 | 1 | 2 | 3 | 4 | |  | –9.2 | –5.8 | 2.4 | 1 | 4.4 | 7.8 |   ​ The expression changes from negative to positive in this interval. | |  | e. | ​   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | -1 | 0 | 1 | 2 | 3 | 4 | |  | –9.2 | 5.8 | –2.4 | 1 | 4.4 | 7.8 |   ​ The expression changes from negative to positive in this interval. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2.119 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 8:02 AM | |

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| 51. Determine which of the following values of *x* is a solution to the equation.   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 2.1.3a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 8:10 AM | |

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| 52. Determine which of the following values of *x* is a solution to the equation.  ​   |  |  |  | | --- | --- | --- | |  | a. | , | |  | b. |  | |  | c. | , | |  | d. | , | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 2.1.4c | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 8:13 AM | |

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| 53. Which of the following equations is not a conditional equation?   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 2.1.9 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 8:13 AM | |

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| 54. Which of the following equations is not an identity equation?   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 2.1.11 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 8:14 AM | |

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| 55. Solve:     |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 2.1.22 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 8:14 AM | |

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| 56. Solve:     |  |  |  | | --- | --- | --- | |  | a. | ​  ​ | |  | b. | ​  ​ | |  | c. | ​  ​ | |  | d. | ​  ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 2.1.29 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 8:15 AM | |

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| 57. Solve:  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 2.1.35 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 11/18/2014 2:58 AM | | *DATE MODIFIED:* | 5/11/2015 8:16 AM | |

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| 58. Solve:     |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 2.1.39 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 8:16 AM | |

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| 59. Solve for *x*:     |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 2.1.45 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/11/2015 8:17 AM | |