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| 1. Write the following quadratic equation in general form.     |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.7 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/21/2021 4:58 AM | |

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| 2. Write the quadratic equation in general form.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.7 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 10/22/2014 9:11 AM | |

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| 3. Write the quadratic equation in general form.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.8 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 10/22/2014 9:11 AM | |

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| 4. Write the following quadratic equation in general form.     |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.9 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/21/2021 5:00 AM | |

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| 5. Write the quadratic equation in general form.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.9 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 10/23/2014 2:14 AM | |

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| 6. Write the following quadratic equation in general form.    *x*(*x* + 7) = *x* - 10   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.12 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/21/2021 5:02 AM | |

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| 7. Write the quadratic equation in general form.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.12 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 10/23/2014 2:30 AM | |

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| 8. Solve the quadratic equation by factoring.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 0, 4 | |  | b. | 1, | |  | c. | 0, | |  | d. | 0, | |  | e. | 0, |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.13 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 10/23/2014 2:36 AM | |

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| 9. Solve the quadratic equation by factoring.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 0, | |  | b. |  | |  | c. | 0, | |  | d. | 1, | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.14 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 10/23/2014 2:39 AM | |

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| 10. Solve the quadratic equation by factoring.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | -3, 7 | |  | b. | 10, 7 | |  | c. | 3, 7 | |  | d. | -3, -7 | |  | e. | 3, -7 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.16 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 9/24/2014 1:01 AM | |

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| 11. Solve the quadratic equation by factoring.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | 5 | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.17 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 9/24/2014 1:04 AM | |

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| 12. ​Solve the following quadratic equation by factoring.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | ​*x* = –5, *x* = –6 | |  | b. | *​x* = , *x* = 6 | |  | c. | *​x* = , *x* = –6 | |  | d. | ​*x* = , *x* = 6 | |  | e. | ​*x* = , *x* = –6 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.18 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/24/2014 1:23 AM | | *DATE MODIFIED:* | 5/15/2015 2:50 AM | |

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| 13. Solve the quadratic equation by factoring.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 3, 7 | |  | b. | -3, -7 | |  | c. | 3, -7 | |  | d. | -3, 7 | |  | e. | 1, -7 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.21 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 10/23/2014 3:19 AM | |

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| 14. Solve the quadratic equation by factoring.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | -2, 6 | |  | b. | 8, 12 | |  | c. | -2, -6 | |  | d. | 2, -6 | |  | e. | 2, 6 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.22 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 10/23/2014 3:21 AM | |

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| 15. Solve the quadratic equation by factoring.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | -7, -14 | |  | b. | 7, -14 | |  | c. | 7, 14 | |  | d. | -7, 14 | |  | e. | -7, 7 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.24 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 10/23/2014 3:30 AM | |

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| 16. Solve the equation by extracting square roots.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.25 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:15 PM | | *DATE MODIFIED:* | 5/14/2015 2:17 AM | |

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| 17. Solve the equation by extracting square roots.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. | 17 | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.27 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 3:32 AM | |

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| 18. Solve the equation by extracting square roots.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *x* | |  | b. | ± | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.28 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 3:33 AM | |

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| 19. Solve the equation by extracting square roots.  ​   |  |  |  | | --- | --- | --- | |  | a. | *x* = , *x* = | |  | b. | *x* = | |  | c. | *x* = , *x* = | |  | d. | *x* = | |  | e. | *x* = , *x* = |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.29 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/24/2014 3:20 AM | | *DATE MODIFIED:* | 4/9/2021 7:58 AM | |

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| 20. Solve the equation by extracting square roots.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. | ± *x* | |  | d. |  | |  | e. | ± |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.29 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 3:36 AM | |

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| 21. Solve the equation by extracting square roots.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. | ​ | |  | c. | ​ | |  | d. |  | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.30 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 3:37 AM | |

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| 22. Solve the equation by extracting square roots.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.33 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 3:39 AM | |

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| 23. Solve the equation  by extracting square roots.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | *x* = 4, | |  | c. |  | |  | d. |  | |  | e. | *x* = 4 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/24/2014 4:31 AM | | *DATE MODIFIED:* | 4/9/2021 8:00 AM | |

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| 24. Solve the equation by extracting square roots.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 3 ± | |  | b. | ​-3 + | |  | c. | ​-3 ± | |  | d. |  | |  | e. | ​-3 - |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.34 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 3:43 AM | |

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| 25. Solve the equation by extracting square roots.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | - 4 | |  | c. | - | |  | d. | ​4*x* | |  | e. | 4 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.37 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 4:02 AM | |

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| 26. Solve the equation by extracting square roots.  ​   |  |  |  | | --- | --- | --- | |  | a. | *x* = 1 | |  | b. | *x* = | |  | c. | *x* = | |  | d. | *x* = , | |  | e. | No solution |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/24/2014 5:27 AM | | *DATE MODIFIED:* | 4/9/2021 8:03 AM | |

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| 27. Solve the quadratic equation by completing the square.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | -6, -3 | |  | b. | 6, 3 | |  | c. | -6, 3 | |  | d. | ​6, 3 | |  | e. | 18, -3 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.39 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 5/15/2015 3:05 AM | |

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| 28. Solve the following quadratic equation by completing the square.     |  |  |  | | --- | --- | --- | |  | a. | *x* = –2, *x* = –2 | |  | b. | *​x* = –2, *x* = 2 | |  | c. | ​*x* = 2 | |  | d. | ​*x* = 8, *x* = –8 | |  | e. | ​*x* = 2, *x* = 18 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.40 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 4:47 AM | |

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| 29. Solve the quadratic equation by completing the square.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 4, -3 | |  | b. | 4, | |  | c. | -4, -3 | |  | d. | -4, 3 | |  | e. | 4, 3 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.40 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 4:52 AM | |

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| 30. ​Solve the following quadratic equation by completing the square.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *​x* = | |  | b. | ​*x* = | |  | c. | ​*x* = , | |  | d. | *​x* = , | |  | e. | *​x* = –8, –3 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.43 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/24/2014 6:14 AM | | *DATE MODIFIED:* | 5/15/2015 3:06 AM | |

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| 31. Rewrite the quadratic portion of the algebraic expression as the sum or difference of two squares by completing the square.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.49 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 5:05 AM | |

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| 32. Rewrite the quadratic portion of the algebraic expression as the sum or difference of two squares by completing the square.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.50 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 5/15/2015 3:08 AM | |

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| 33. Rewrite the quadratic portion of the algebraic expression as the sum or difference of two squares by completing the square.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.51 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 5:13 AM | |

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| 34. Rewrite the quadratic portion of the algebraic expression as the sum or difference of two squares by completing the square.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.55 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 5:16 AM | |

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| 35. Rewrite the quadratic portion of the algebraic expression as the sum or difference of two squares by completing the square.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.56 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 5:27 AM | |

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| 36. Use a graphing utility to graph the equation. Use the graph to approximate any *x*-intercepts of the graph.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *x* = 0, –4 | b. | *x* = 0, −2 | |  | c. | *x* = –4, −2 | d. | *x* = −2 | |  | e. | *x* = 0, −2, –4 |  |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.57 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 5/21/2021 5:26 AM | |

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| 37. Use a graphing utility to graph the equation. Use the graph to approximate any *x*-intercepts of the graph.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *x* = 3, 5 | b. | *x* = 3, 4 | |  | c. | *x* = 4, 5 | d. | *x* = 4 | |  | e. | *x* = 3, 4, 5 |  |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.58 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 5/21/2021 5:30 AM | |

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| 38. Use a graphing utility to graph the equation. Use the graph to approximate any *x*-intercepts of the graph.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *x* = 3, 4 | b. | *x* = 4, 5 | |  | c. | *x* = 4 | d. | *x* = 3, 5 | |  | e. | ​  *x* = 3, 4, 5 |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.59 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 5/21/2021 5:34 AM | |

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| 39. Use a graphing utility to graph the equation. Use the graph to approximate any *x*-intercepts of the graph.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *x* = 1, −3 | b. | *x* = −1 | |  | c. | *x* = 1, −1 | d. | *x* = −3, −1 | |  | e. | *x* = −3, −1, 1 |  |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.63 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 5/21/2021 5:46 AM | |

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| 40. Use a graphing utility to graph the equation. Use the graph to approximate any *x*-intercepts of the graph.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *x* = −1, 1, 3 | b. | *x* = 1 | |  | c. | *x* = 1, 3 | d. | *x* = −1, 1 | |  | e. | *x* = −1, 3 |  |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.64 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 5/21/2021 6:00 AM | |

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| 41. ​Use the Quadratic Formula to solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.76 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/25/2014 1:14 AM | | *DATE MODIFIED:* | 10/23/2014 5:38 AM | |

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| 42. Use the Quadratic Formula to solve the equation.  ​   |  |  |  | | --- | --- | --- | |  | a. | *x* = 11, *x* = 7 | |  | b. |  | |  | c. |  | |  | d. | *x* = –9, *x* = 9 | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.78 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 9/25/2014 3:54 AM | |

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| 43. Use the Quadratic Formula to solve the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.89 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 5:48 AM | |

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| 44. Use the Quadratic Formula to solve the equation . (Round your answer to three decimal places.)  ​   |  |  |  | | --- | --- | --- | |  | a. | ​*x* = –4.797, *x* = 1.654 | |  | b. | ​*x* = –1.274, *x* = –1.652 | |  | c. | ​*x* = –2.741, *x* = 1.559 | |  | d. | ​*x* = –1.475, *x* = –0.999 | |  | e. | *​x* = –3.882, *x* = 3.704 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.91 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 5:52 AM | |

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| 45. ​Use the Quadratic Formula to solve (  *x*–10)2 = 8*x*  ​   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.96 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/25/2014 2:30 AM | | *DATE MODIFIED:* | 10/23/2014 5:59 AM | |

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| 46. Use the Quadratic Formula to solve the equation . (Round your answer to three decimal places.)  ​   |  |  |  | | --- | --- | --- | |  | a. | *x* = –6.172, *x* = 4.711 | |  | b. | *x* = –2.850, *x* = 2.058 | |  | c. | *x* = –2.649, *x* = 1.405 | |  | d. | *x* = –5.257, *x* = 6.761 | |  | e. | *x* = –4.116, *x* = 4.616 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.101 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 4/9/2021 8:26 AM | |

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| 47. Solve the following quadratic equation using any convenient method.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *​x* = , *x* = 0 | |  | b. | ​*x* = –1 | |  | c. | ​*x* = , *x* = | |  | d. | ​*x* = | |  | e. | ​*x* = –1, *x* = 20 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.106 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/25/2014 3:57 AM | | *DATE MODIFIED:* | 9/25/2014 5:14 AM | |

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| 48. Solve the equation using any convenient method.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 5 | |  | b. | 9 | |  | c. | 6 | |  | d. | 8 | |  | e. | 7 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.108 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 9/25/2014 4:11 AM | |

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| 49. ​Solve the following quadratic equation using any convenient method.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | ​*x* = , *x* = 0 | |  | b. | *​x* = | |  | c. | ​*x* = | |  | d. | *​x* = | |  | e. | ​*x* = , *x* = |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.111 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/25/2014 4:14 AM | | *DATE MODIFIED:* | 9/25/2014 4:39 AM | |

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| 50. The floor of a one-story building is 14 feet longer than it is wide (see figure). The building has 2,760 square feet of floor space.  ​  ​  Write a quadratic equation for the area of the floor in terms of *w* and find the length and width of the floor.  ​   |  |  |  | | --- | --- | --- | |  | a. | *w* (*w* + 14) = 2,760  *w* = 50 ft and *l* = 60 ft | |  | b. | *w* (*w* + 14) = 2,760  *w* = 49 ft and *l* = 60 ft | |  | c. | *w* (*w* + 14) = 2,760  *w* = 47 ft and  *l* = 60 ft | |  | d. | *w* (*w* + 14) = 2,760  *w* = 48 ft and *l* = 60 ft | |  | e. | *w* (*w* + 14) = 2,760  *w* = 46 ft and *l* = 60 ft |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4.113 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 6:52 AM | |

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| 51. Write  in general form.   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 1-4 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 9/25/2014 4:56 AM | |

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| 52. Solve  by factoring.  ​   |  |  |  | | --- | --- | --- | |  | a. | *x* = | |  | b. | *x* = –4, 2 | |  | c. | *x* = , | |  | d. | *x* = –2, 4 | |  | e. | *x* = 2, –2 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 5-14 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/25/2014 4:59 AM | | *DATE MODIFIED:* | 5/21/2021 6:05 AM | |

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| 53. Solve the following quadratic equation with respect to *w* by factoring.  ​   |  |  |  | | --- | --- | --- | |  | a. | *w* =  *a*, 9*b* | |  | b. | *w* =  *a* + 3*b*, -*a* + 3*b* | |  | c. | *w* = *a*, –9 *b* | |  | d. | *w* =  *a* + 3*b*,  *a* - 3*b* | |  | e. | *w* = -*a* - 3*b*, -*a* + 3*b* |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 5-14 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 5/21/2021 6:07 AM | |

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| 54. Solve (*x*  + 4 )2 = 9 by extracting square roots.   |  |  |  | | --- | --- | --- | |  | a. | *x* = –3, –5 | |  | b. | *x* = –3, –10 | |  | c. | *x* = –1, –7 | |  | d. | *x* = 0, –9 | |  | e. | *x* = –4, –6 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 15-22 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 10/23/2014 7:06 AM | |

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| 55. Solve  by completing the square.   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 23-32 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 9/25/2014 7:21 AM | |

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| 56. Solve  using the quadratic formula.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | *x* = |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 45-52 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/25/2014 7:23 AM | | *DATE MODIFIED:* | 5/21/2021 6:08 AM | |

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| 57. Solve  using the quadratic formula.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | *x* = |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 45-52 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/25/2014 7:48 AM | | *DATE MODIFIED:* | 5/21/2021 6:09 AM | |

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| 58. Solve  using the quadratic formula. Round answers to the nearest thousandth.   |  |  |  | | --- | --- | --- | |  | a. | *x* = –1.644, 2.862 | |  | b. | *x* = –1.182, 2.402 | |  | c. | *x* = –0.732, 2.732 | |  | d. | *x* = –0.609, 1.732 | |  | e. | *x* = –0.264, 2.823 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 45-52 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 5/21/2021 6:11 AM | |

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| 59. ​Solve:     |  |  |  | | --- | --- | --- | |  | a. | *​x* = ,  –2 | |  | b. | ​*x* = , | |  | c. | *​x* = –3, | |  | d. | ​*x* = –3,  –2 | |  | e. | ​*x* = 3, |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 53-60 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/25/2014 8:19 AM | | *DATE MODIFIED:* | 5/15/2015 3:16 AM | |

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| 60. Solve the following equation using any convenient method.   |  |  |  | | --- | --- | --- | |  | a. | *x* = –2, 5 | |  | b. | *x* = –2 ± 5 *i* | |  | c. | *x* = –25, 5 | |  | d. | *x* = –25, –2 | |  | e. | *x* = –5 ± 2 *i* |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 53-60 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 9/25/2014 8:52 AM | |

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| 61. ​Solve the following equation using any convenient method.  *​x*2 –4*x*+  = 0   |  |  |  | | --- | --- | --- | |  | a. | ​*x* = –1 ±  *i* | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 53-60 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/26/2014 1:37 AM | | *DATE MODIFIED:* | 9/26/2014 2:11 AM | |

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| 62. ​Solve the following equation using any convenient method.  ​   |  |  |  | | --- | --- | --- | |  | a. | *x* = | |  | b. | *​x* = 49 | |  | c. | *​x* = 7 | |  | d. | *​x* = –7, 4 | |  | e. | ​*x* = |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 53-60 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 9/26/2014 2:14 AM | | *DATE MODIFIED:* | 9/26/2014 2:41 AM | |

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| 63. Find two quadratic equations having the following solutions.   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 67-76 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 9/25/2014 9:05 AM | |

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| 64. Find two quadratic equations having the following solutions.  4 + 7 *i*, 4 - 7 *i*   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 67-76 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/10/2014 4:16 PM | | *DATE MODIFIED:* | 9/26/2014 1:35 AM | |