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| 1. For following function, select (on the same set of coordinate axes) a graph for .  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.7a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 12:23 AM | |

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| 2. For following function, select (on the same set of coordinate axes) a graph for .  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.8b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 2:36 AM | |

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| 3. For following function, select (on the same set of coordinate axes) a graph for .  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.7b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 12:29 AM | |

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| 4. For following function, select (on the same set of coordinate axes) a graph of function for .  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.10a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 12:31 AM | |

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| 5. Use the given graph of *f* to select the graph for the following function.  ​  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​  ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.11f | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 12:37 AM | |

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| 6. Use the given graph of *f* to select the graph for the following function.  ​  *y* = *f*(2*x*)  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.12g | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 12:41 AM | |

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| 7. Use the given graph of *f* to select the graph for following function.  ​  ​  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.13d | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 12:57 AM | |

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| 8. Use the given graph of *f* to select the graph for following function.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.14c | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:04 AM | |

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| 9. Use the graph of  to write an equation for the function whose graph is shown.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.15a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:07 AM | |

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| 10. Use the graph of  to write an equation for the function whose graph is shown.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.15c | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:08 AM | |

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| 11. Use the graph of  to write an equation for the function whose graph is shown.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.16a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:09 AM | |

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| 12. Use the graph of  to write an equation for the function whose graph is shown.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.16b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:09 AM | |

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| 13. Use the graph of  to write an equation for the function whose graph is shown.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.17a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:10 AM | |

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| 14. Use the graph of  to write an equation for the function whose graph is shown.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.17d | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:11 AM | |

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| 15. Use the graph of  to write an equation for the function whose graph is shown.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.18a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:12 AM | |

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| 16. Use the graph of  to write an equation for the function whose graph is shown.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | None of the above |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.18c | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:13 AM | |

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| 17. Identify the parent function and the transformation shown in the graph. Write an equation for the function shown in the graph.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Horizontal shift of | |  | b. | Vertical shift of | |  | c. | Vertical shift of | |  | d. | Horizontal shift of | |  | e. | Vertical shift of |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.19 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:13 AM | |

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| 18. Identify the parent function and the transformation shown in the graph. Write an equation for the function shown in the graph.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Horizontal shift of the *x*-axis of | |  | b. | Vertical shift of the *y*-axis of | |  | c. | Reflection in the *x*-axis of | |  | d. | Horizontal shift of the *y*-axis of | |  | e. | Vertical shift of the *x*-axis of |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.21 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:15 AM | |

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| 19. Identify the parent function and the transformation shown in the graph. Write an equation for the function shown in the graph.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Reflection in the *x*-axis and vertical shift of | |  | b. | Vertical shift of *x*-axis and vertical shift of | |  | c. | Reflection in the *x*-axis and vertical shift of | |  | d. | Horizontal shift of *x*-axis and vertical shift of | |  | e. | Horizontal shift of *x*-axis and vertical shift of |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.23 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:17 AM | |

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| 20. Identify the parent function and the transformation shown in the graph. Write an equation for the function shown in the graph.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Reflection in the *x*-axis of | |  | b. | Horizontal shift of *x*-axis of | |  | c. | Reflection in the *y*-axis of | |  | d. | Horizontal shift of *x*-axis of | |  | e. | Reflection in the *y*-axis of |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.24 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:21 AM | |

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| 21. Identify the parent function *f*. The parent function is related to *g*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Absolute Value Function, | |  | b. | Constant Function, | |  | c. | Identity Function, | |  | d. | Quadratic Function, | |  | e. | Cubic Function, |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.25a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 9/30/2014 8:33 AM | |

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| 22. The parent function  is related to *g*. Describe the sequence of transformations from *f* to *g*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Reflection in the *y*-axis and vertical shift  units upward. | |  | b. | Vertical shift of the *x*-axis and vertical shift  units upward. | |  | c. | Reflection in the *x*-axis and vertical shift  units upward. | |  | d. | Reflection in the *x*-axis and vertical shift  units downward. | |  | e. | Reflection in the *y*-axis and vertical shift  units downward. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.25b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:08 PM | |

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| 23. Select the graph of *g*.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.26c | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 9/30/2014 8:41 AM | |

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| 24. The parent function  is related to *g*. Use function notation to write *g* in terms of  *f*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.27d | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:09 PM | |

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| 25. Function  is related to the parent function. Identify the parent function  *f*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Identity Function, | |  | b. | Cubic Function, | |  | c. | Absolute Value Function, | |  | d. | Quadratic Function, | |  | e. | Constant Function, |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.28a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:12 PM | |

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| 26. Select the graph of *g*.  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.29c | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:33 AM | |

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| 27. The parent function  is related to *g*. Use function notation to write *g* in terms of *f*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.31d | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:14 PM | |

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| 28. Function  is related to the parent function. Identify the parent function  *f*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Square Root Function, | |  | b. | Identity Function, | |  | c. | Quadratic Function, | |  | d. | Cubic Function, | |  | e. | Reciprocal Function, |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.35a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:17 PM | |

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| 29. The parent function  is related to *g*. Use function notation to write *g* in terms of  *f*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | None of the above |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.37d | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:17 PM | |

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| 30. Select the graph of *g*.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.39c | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:39 AM | |

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| 31. The parent function  is related to *g*. Describe the sequence of transformations from  *f* to *g*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Reflection in the *y*-axis and vertical shift  units downward. | |  | b. | Reflection in the *x*-axis and vertical shift  units downward. | |  | c. | Reflection in the *x*-axis and vertical shift  units upward. | |  | d. | Reflection in the *y*-axis and vertical shift  units upward. | |  | e. | Vertical shift of  the *x*-axis and vertical shift  units downward. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.41b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:22 PM | |

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| 32. Function  is related to the parent function. Identify the parent function  *f*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Reciprocal Function, | |  | b. | Quadratic Function, | |  | c. | Absolute Value Function, | |  | d. | Cubic Function, | |  | e. | Constant Function, |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.43a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:22 PM | |

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| 33. The parent function  is related to *g*. Use function notation to write *g* in terms of  *f*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.45d | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:24 PM | |

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| 34. Function g is related to the parent function. Identify the parent function  *f*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Quadratic Function, | |  | b. | Greatest Integer Function, | |  | c. | Constant Function, | |  | d. | Square Root Function, | |  | e. | Absolute Value Function, |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.47a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:25 PM | |

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| 35. The parent function  is related to *g*. Describe the sequence of transformations from  *f* to *g*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Horizontal stretch and vertical shift  units downward. | |  | b. | Vertical shift  units to the right. | |  | c. | Vertical stretch  units to the left. | |  | d. | Horizontal stretch and vertical shift  units upward. | |  | e. | Horizontal shift  units to the right. |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.49b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 10/1/2014 5:55 AM | |

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| 36. Select the graph of *g*.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.51c | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:44 AM | |

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| 37. The parent function  is related to *g*. Use function notation to write *g* in terms of  *f*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.53d | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:27 PM | |

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| 38. Write an equation for the function that is described by the given characteristic.  ​  The shape of , but shifted three units to the right and five units downward.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.55 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 10/1/2014 6:17 AM | |

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| 39. Write an equation for the function that is described by the given characteristic.  ​  The shape of , but shifted 17 units to the right.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.57 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 10/1/2014 6:20 AM | |

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| 40. Write an equation for the function that is described by the given characteristic.  ​  The shape of , but shifted three units to the left and reflected in both the *x*-axis and the *y*-axis.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.61 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:30 PM | |

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| 41. Use the graph of  to write an equation for the function whose graph is shown.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.63a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:47 AM | |

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| 42. Use the graph of  to write an equation for the function whose graph is shown.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.65b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:48 AM | |

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| 43. Identify the parent function and the transformation shown in the graph. Write an equation for the function shown in the graph.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Vertical stretch of | |  | b. | Horizontal stretch of | |  | c. | Vertical stretch of | |  | d. | Vertical stretch of | |  | e. | Horizontal stretch of |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.67 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:49 AM | |

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| 44. Identify the parent function and the transformation shown in the graph. Write an equation for the function shown in the graph.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | Reflection in the *y*-axis and vertical shrink of . | |  | b. | Reflection in the *y*-axis and vertical shrink of . | |  | c. | Reflection in the *y*-axis and vertical shrink of . | |  | d. | Reflection in the *y*-axis and vertical shrink of . | |  | e. | Reflection in the *y*-axis and vertical shrink of . |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.71 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:50 AM | |

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| 45. Use the viewing window shown to select a possible equation for the transformation of the parent function.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.75 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:51 AM | |

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| 46. Determine whether the statement is true or false. Justify your answer.  ​  The graphs of  and  are identical.  ​   |  |  |  | | --- | --- | --- | |  | a. | False. | |  | b. | True. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.83 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 10/1/2014 6:56 AM | |

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| 47. Use the graph of  to write an equation for the function whose graph is shown.   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.17 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | PREC.LARS.16.128 - Write equations for transformations of common functions | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/15/2015 1:54 AM | |

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| 48. Describe the sequence of transformations from the related common function  to *g*.    ​   |  |  |  | | --- | --- | --- | |  | a. | Vertical shift 4 units up; then vertical shrink by a factor of  2. | |  | b. | Horizontal shift 4 units left; then vertical shrink by a factor of  2. | |  | c. | Horizontal shift 4 units right; then vertical stretch by a factor of  2. | |  | d. | Vertical shift 4 units down; then vertical shrink by a factor of  2. | |  | e. | Horizontal shift 4 units left; then vertical stretch by a factor of 2. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.26 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | PREC.LARS.16.129 - Recognize transformed graphs of common functions | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:48 PM | |

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| 49. Write an equation for the function that is described by the following characteristics.  The shape of , but moved five units down, four units to the left, and then reflected in the *x*-axis.   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.58 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | PREC.LARS.16.128 - Write equations for transformations of common functions | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:50 PM | |

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| 50. Write an equation for the function that is described by the following characteristics.  The shape of *f*(*x*) = [[*x*]], but reflected in the *y*-axis, moved eight units down.   |  |  |  | | --- | --- | --- | |  | a. | *g*(*x*) = [[*–x*]] + 8 | |  | b. | *g*(*x*) = –[[*x* – 8]] | |  | c. | *g*(*x*) = –[[*x* + 8]] | |  | d. | *g*(*x*) = [[*–x*]] – 8 | |  | e. | *g*(*x*) = –[[*x*]] + 8 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.5.60 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | PREC.LARS.16.128 - Write equations for transformations of common functions | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:52 PM | |

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| 51. Describe the sequence of transformations from the related common function  to *g.*    ​   |  |  |  | | --- | --- | --- | |  | a. | Horizontal shift 8 units right; then vertical stretch by a factor of  2. | |  | b. | Horizontal shift 8 units left; then vertical stretch by a factor of 2. | |  | c. | Horizontal shift 8 units left; then vertical shrink by a factor of  2. | |  | d. | Vertical shift 8 units up; then vertical shrink by a factor of  2. | |  | e. | Vertical shift 8 units down; then vertical shrink by a factor of  2. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 42 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | PREC.LARS.16.129 - Recognize transformed graphs of common functions | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:54 PM | |

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| 52. Describe the sequence of transformations from the related common function  to *g.*    ​   |  |  |  | | --- | --- | --- | |  | a. | Reflection in the *x*-axis; then vertical shift 3 units down. | |  | b. | Reflection in the *x*-axis; then vertical shift 3 units up. | |  | c. | Reflection in the *y*-axis; then vertical shift 3 units up. | |  | d. | Reflection in the *y*-axis; then horizontal shift 3 units right. | |  | e. | Reflection in the *y*-axis; then horizontal shift 3 units left. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 43 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | PREC.LARS.16.129 - Recognize transformed graphs of common functions | | *DATE CREATED:* | 6/10/2014 4:18 PM | | *DATE MODIFIED:* | 5/12/2015 12:55 PM | |