**Multiple choices**

|  |  |  |
| --- | --- | --- |
| **1.** | **Describe the transformations necessary to transform the graph of** . | |
|  | **a.)** expanded vertically by a factor of 3, reflected across the x-axis translated down 1  unit. | **b.)** expanded vertically by a factor of 3, reflected across the y-axis translated down 1 unit. |
|  | **c.)** expanded horizontally by a factor of 3, reflected across the x-axis translated down 1 unit. | **d.)** expanded vertically by a factor of 1, reflected across the x-axis translated down 3 units. |

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| **2.** | **Transform the function - expand horizontally by a factor of 2, translate right 1 unit translate up 5 units. The resulting function as an equation is:** | |
|  | **a.)** | **b.)** |
|  | **c.)** | **d.)** |

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| **3.** | **Describe the transformations necessary to transform the graph of** | |
|  | **a.)** Translated 3 units down | **b.)** Translated 3 units left |
|  | **c.)** Translated 3 units up | **d.)** Translated 3 units right |

**4. Graph piecewise function.**

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**5. Use the graph of parent function to graph the function. Find the domain and the range of the new function.**

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**ANSWERS**

**Multiple choices**

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| **1.** | **Describe the transformations necessary to transform the graph of** . | |
|  | **a.)**  expanded vertically by a factor of 3, reflected across the x-axis translated down 1 **unit.** | **b.)**  expanded vertically by a factor of 3, reflected across the y-axis translated down 1 unit. |
|  | **c.)**  expanded horizontally by a factor of 3, reflected across the x-axis translated down 1 **unit.** | **d.)**  expanded vertically by a factor of 1, reflected across the x-axis translated down 3 units. |

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| --- | --- | --- |
| **2.** | **Transform the function - expand horizontally by a factor of 2, translate right 1 unit translate up 5 units. The resulting function as an equation is:** | |
|  | **a.)** | **b.)** |
|  | **c.)** | **d.)** |

|  |  |  |
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| **3.** | **Describe the transformations necessary to transform the graph of** | |
|  | **a.)** Translated 3 units down | **b.)** Translated 3 units left |
|  | **c.)** Translated 3 units up | **d.)** Translated 3 units right |

**4. Graph piecewise function.**

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**5. Use the graph of parent function to graph the function. Find the domain and the range of the new function.**

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|  | **Parent function**  **Transformation:**  Reflected in the x axis  Translated 1 unit up  Translated 1 unit right |  |