# Unit 2A Day 2 HW
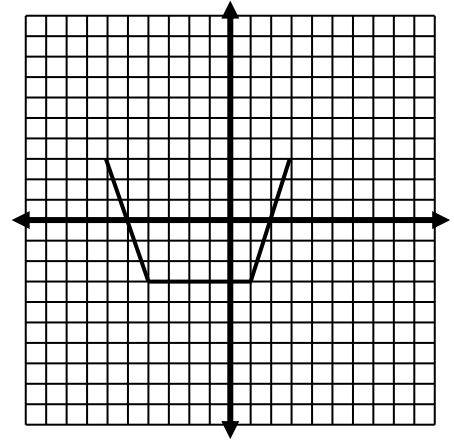
Name _____

This is the function **Bowl, B(x)**.

1. List its characteristic points.

2. Are these the only points on the graph of Bowl? Explain.

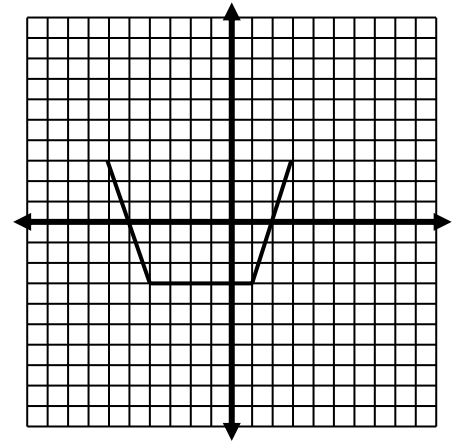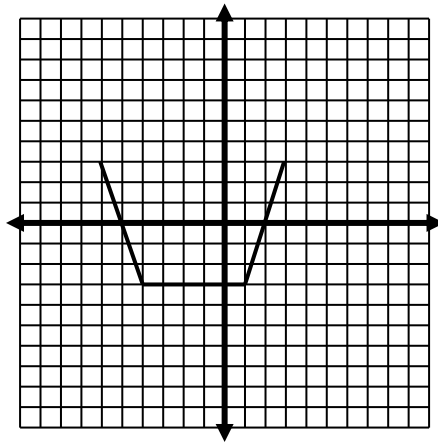3. What is the domain of Bowl?
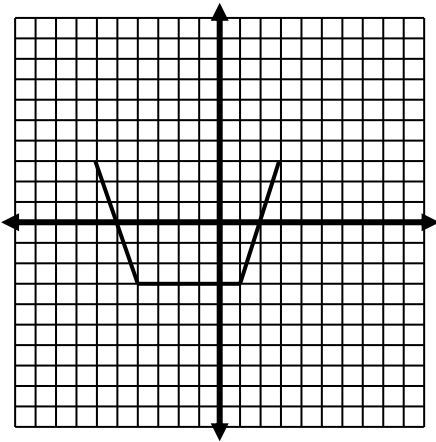
4. What is the range of Bowl?



For each of the following, list the effect on the graph of Bowl and then graph the new function.
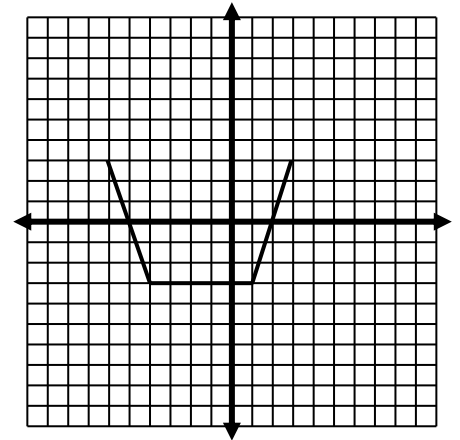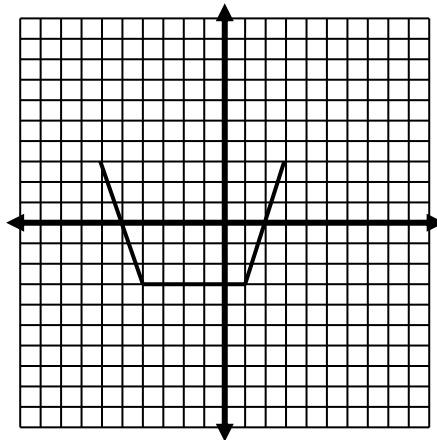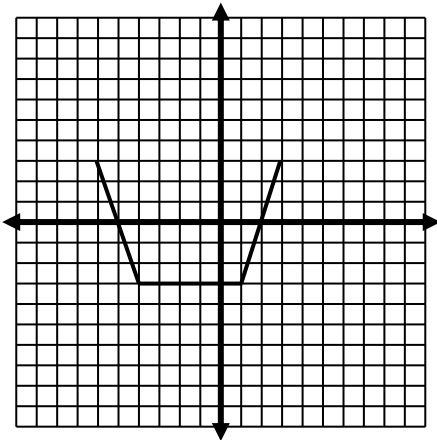
5. $y = B(-x)$

6. $y = -B(x)$

7. $y = \frac{1}{3}B(x)$



8. $y = 3\,B(x)$

9. $y = B(x-3)$

10. $y = B(x+2) - 1$

11. List the transformations needed to graph the following. Remember that translations are done last.

    a.  $y = 2F(x) + 2$  _____

                                      _____

    b.  $y = \frac{1}{3}F(x - 6)$  _____

                                        _____

    c.  $y = -F(x) - 12$       _____

                                        _____

    d.  $y = 3F(\text{-}x)$        _____

                                        _____

    e.  $y = -5F(x)$        _____

                                        _____

12. Looking back at the examples of parent functions we have worked with, create your own original parent function on the graph.  Make sure that you have graphed a function.

    a.  How can you tell your graph is a function?

    b.  Explain the name you picked.

    c.  Write an equation for your function that will have the following effects.

        • Stretch vertically by 2 and translate left 4.

           _____

        • Reflect in the x-axis and compress vertically by $\frac{1}{2}$

           _____

        • Translate up 6 and right 4

           _____

    d.  Graph each of the children from part c above using a separate graph for each. You will need to use your own graph paper.