MT-A141 Precalculus Worksheet 2.6

Group: _____ Present: _____

1. Graph $Y_1 = |x|$ in a square window.

   Predict how the graph of $Y_2 = 2|x|$ will differ from the graph of $y = |x|$.

   Prediction: _____

   Check by graphing! (You can graph $Y_2 = 2Y_1$)

   Predict how the graph of $Y_2 = -2|x|$ will differ from the graph of $y = |x|$.

   Prediction: _____

   Check by graphing! (You can graph $Y_2 = -2Y_1$)

   Predict how the graph of $Y_2 = |x + 1|$ will differ from the graph of $y = |x|$.

   Prediction: _____

   Check by graphing! (You can graph $Y_2 = Y_1(x + 1)$ on a TI-82 or TI-83)

   Predict how the graph of $Y_2 = -2|x - 2| + 1$ will differ from the graph of $y = |x|$.

   Prediction: _____

   Check by graphing! (You can graph $Y_2 = -2Y_1(x - 2) + 1$ on a TI-82 or TI-83)

2. Use algebra (complete the square) to determine the transformations you should apply to the graph of $y = x^2$ to transform it to the graph of $y = 2x^2 - 12x + 19$.

   Transformations:

   Check your algebra by graphing!