**Graphing Extra Credit Opportunity**

**Directions:** A certain video game is created using a digital coordinate grid. In one scene of the game, a 10-unit by 10-unit grid is used to represent a room. The player can only move in certain areas of the grid though! The restrictions are that the player cannot move in the following areas:

where f(x) < -2x – 18 where -3 > f(x) where f(x) < -|x – 6| + 3

where f(x) > |x – 8| + 5 where f(x) > -x + 17 where f(x) > ½|2x + 3|

Shade the region of the coordinate plane in which the player cannot move.

Then list a sequence of points that the player can move in, starting at one end of the room, and ending at the other end of the room. Once the player reaches the rightmost part of the room, he/she will move to the next room! Through completing this activity, you can earn up to 3.6 points towards your graphing quiz! Show any necessary work on a separate sheet of paper.

