X Marks the Spot

Directions:

In this activity, you are a pirate searching for treasure on Algebra Island. Luckily your efforts will be worthwhile because you know how to solve systems of equations by graphing. Wherever the two linear functions intersect is where the solution (your treasure) will be found.;

Sometimes the treasure cannot be found because the lines never meet to form an "X." This is because they are parallel. In this case there is no solution. Other times the lines appear to be the same and intersect at every single point. In this case there are infinite solutions. Treasure is everywhere!

1. Find the solution for the following system of linear functions by graphing. $y = x + 2$ $y = -x - 4$

   Ordered Pair Solution: (_____ , _____)

2. Find the solution for the following system of linear functions by graphing. $y = 3x$ $y = 3x - 6$

   Ordered Pair Solution: (_____ , _____)

3. Find the solution for the following system of linear functions by graphing. $y = -2x + 1$ $y = 3x - 9$

   Ordered Pair Solution: (_____ , _____)