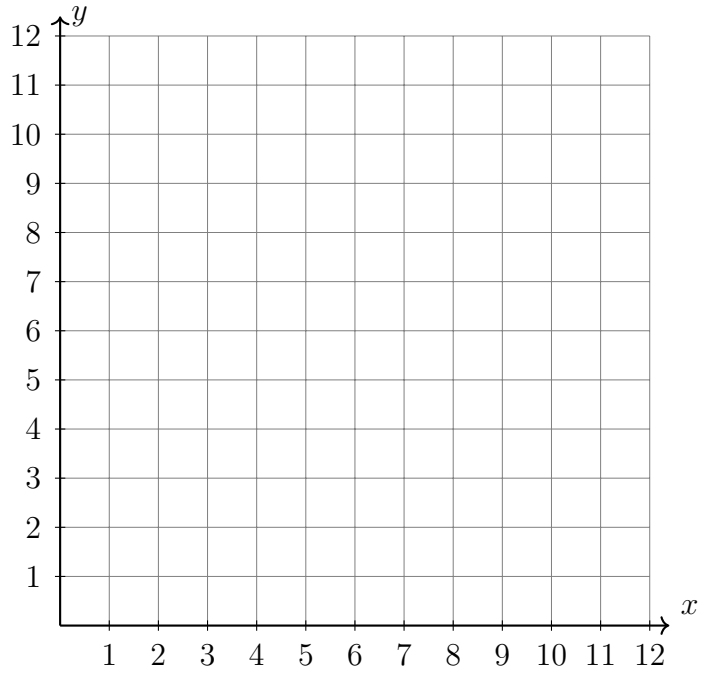
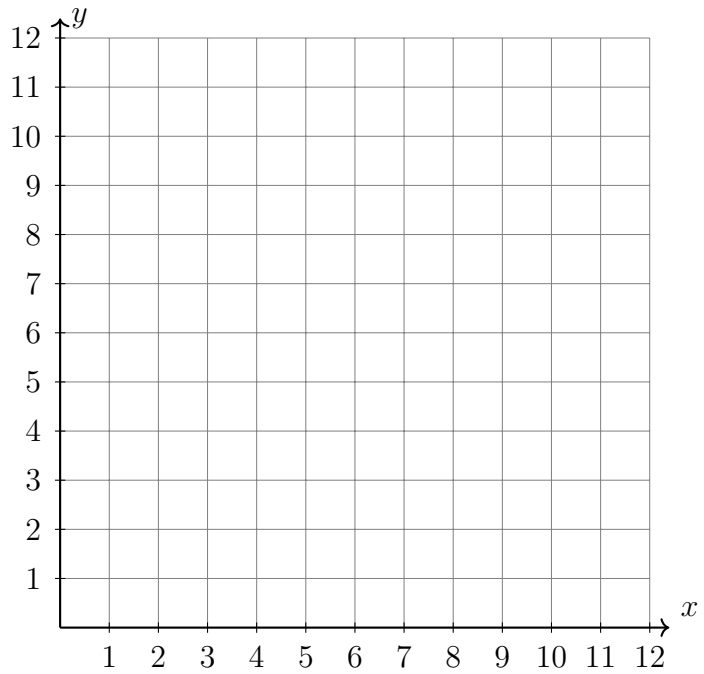
6.9 Classwork: Applications of systems of linear equations HSG.REI.C.6

1. Two values, x and y, have a total of 12. The larger, y, is 3 more than twice x. Write a system of linear equations to represent this situation, then graph them to solve.



2. Steve buys eight sandwiches for his friends. Small sandwiches cost \$3 and large ones \$6. He spends \$33 in all. How many of each kind did he buy?



3. Graph and label the two equations. Mark their intersection as an ordered pair.

   $f(x) = -\frac{1}{2}x + 3$ $\qquad\qquad$ $g(x) = \frac{7}{4}x - 6$

   Are the lines parallel, perpendicular, or neither? Justify your answer.