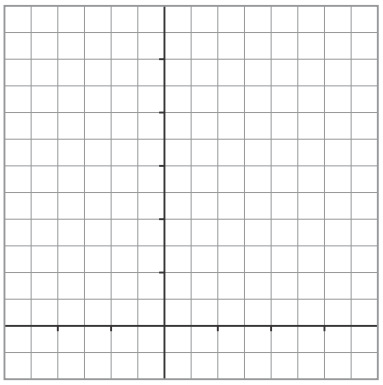
# Linear Systems Review

1. a)Create a linear system to model this situation:
   A family recently moved to Calgary and each member registered at the library. It costs $12 for an adult registration and $6 for a young adult registration.
   b) The family registered 3 adults and 5 young adults. Use the data in the problem to verify these numbers

2. Solve this linear system by graphing
   $x + y = 6$
   $x + 2y = 7$



3. Use graphing technology to find the solution to this linear system:
   $3x + 4y = 5$
   $5x - 2y = 4$
4. Solve this linear system by substitution.
   $2x - 3y = -2$
   $4x + y = 24$
5. Solve this linear system by elimination
   $2x - y = 9$
   $3x + 4y = -14$
6. Find the number of solutions in each linear system
   a. $-x + y = 8$
      $2x - 2y = -16$
   b. $4x + y = 2$
      $8x + 2y = 8$

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**1.** **a)** $a + y = 8$; $12a + 6y = 66$

**2.** $x = 5$; $y = 1$ **3.** $x = 1$; $y = 0.5$

**4.** $x = 5$; $y = 4$ **5.** $x = 2$; $y = -5$

**6.** **a)** Infinite solutions **b)** No solution