

Algebra 1- Week 13 Homework

Monday-

1. **Graphing Linear Systems of Equations:** Graph both equations in $y = mx + b$ format (m =slope, rise/run; b = y -intercept, start value). One solution- where they intersect; no solutions- parallel lines, will never intersect; infinite solutions- same exact line.
2. **Solving Linear Systems of Equations with Substitution:** Take one equation in the system and replace a variable in the other equation with itself. (Ex: $y = 2x+1$ and $2x + 4y = 14$ $\rightarrow 2x + 4(2x + 1) = 14$)
3. **Solving Linear Systems of Equations with Elimination:** Eliminate a variable (x or y). In order to do so, the coefficient **MUST** form a zero pair when the equations are added or subtracted. You may need to multiply the entire equation by a constant in order to make a zero pair. (Ex: $x + y = 14$ and $2x - y = 2$, add them together $(x + y = 14) + (2x - y = 2) \rightarrow (x + 2x) + (y - y) = (14 + 2) \rightarrow 3x = 16 \rightarrow x = \frac{16}{3}$)
4. **Systems of Equations: Real World Applications:** Write two equations from a scenario either in slope -intercept form ($y = mx + b$, where m = slope / constant rate of change / "per", and b = start value) or in standard form ($Ax + By = C$, where C = total, and A and B = the values being added). Then using one of our methods to solve a system of equations (graphing, substitution, or elimination).

Tuesday/Wednesday- Test! No Homework!

Thursday-

Solve the two problems below. Then, describe the similarities and differences in their solution using at least 4 sentences.

$3x + 4 = 2x + 6$	$3x + 4 < 2x + 6$

Friday-

1. Graph the inequality $y \leq \frac{1}{4}x + 2$ on the coordinate plane to the right.
2. Name two points that lie in the solution set.
3. Is the point (0,2) in the solution set of this inequality? Justify your response in complete sentences.

