

Show all necessary steps clearly, neatly, systematically to receive full credit.

1. Solve by substitution method:
$$\begin{cases} c - 2d = 29 \\ 2(c - 5) = d - 21 \end{cases}$$

2. Solve: $\frac{1}{2}|3 - 4x| - 5 > 6$. Write the solution set in interval notation and graph.

3. A total investment of \$5000 is made into 6% and 9.5% annual simple interest accounts. How much should be invested in the 9.5% annual simple interest account so that the total annual interest earned is \$370? (*show in 3-steps format*)

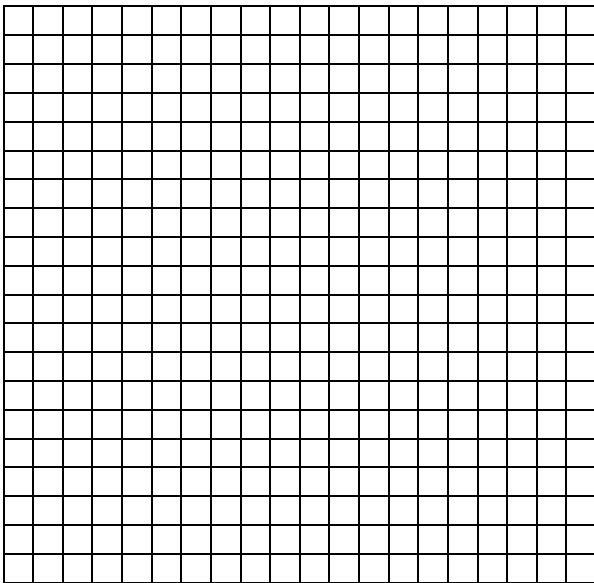
4. Solve: $\frac{x-7}{2} - \frac{x-1}{5} \geq -\frac{x}{4}$. Write the solution set in set-builder notation and graph.

5. Solve: $3\left|\frac{3}{4}x+7\right|-\frac{2}{3}=\frac{7}{3}$.

6. How many pounds of candy that sells for \$7 per pound must be mixed with 6 pounds of candy that sells for \$12 per pound to create a mixture that sell for \$10 per pound? (*show in 3-steps format*)

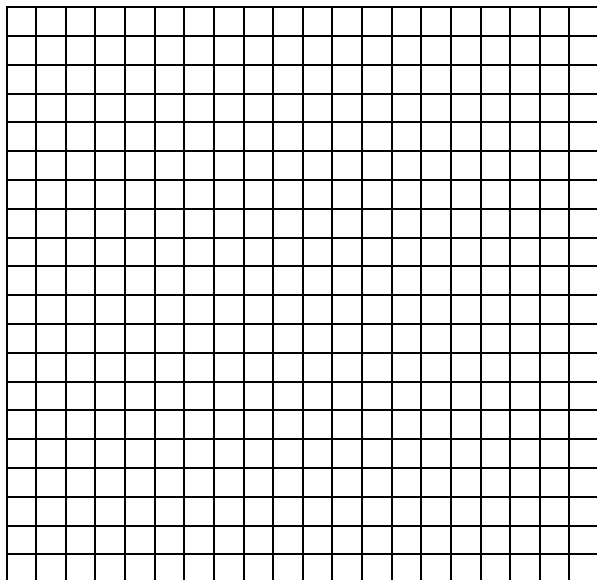
7. Solve: $0.9 < 0.7 - 2x \leq 1.5$. Write the solution set in set-builder notation and graph.

8. Graph the solution set of inequality: $2x - \frac{1}{2}y > 2$.

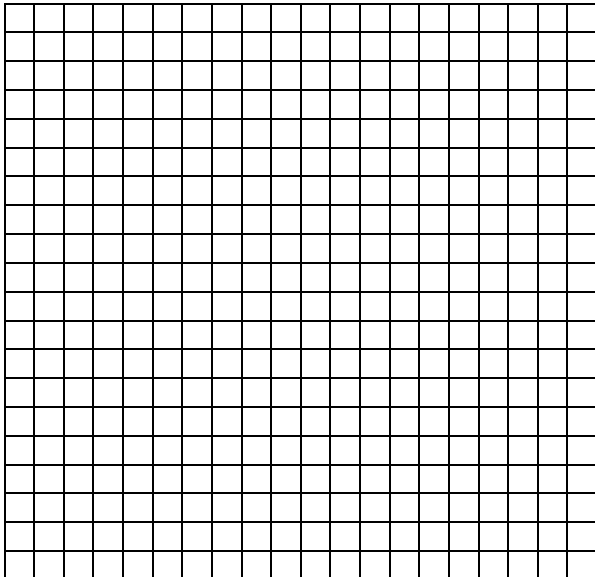


9. Solve: $-5|7x-9|+11 \geq 6$. Write the solution in interval notation and set-builder notation.

10. Graph by transformation: $g(x) = -(x-2)^2 + 4$.



11. Graph the compounded inequality: $y \geq \frac{3}{5}x - 4$ or $5 - 6x < 7$.



12. Solve by elimination method: $\begin{cases} 3x - 2y = 13 \\ 4x - 3y = 6 \end{cases}$.

13. Solve the system:
$$\begin{cases} 2x + 2y = 10 - 3z \\ 3x + y = z \\ x + 2z = 6 - y \end{cases} .$$