PRACTICE

Multiple-Choice Questions

Use the information provided in each question to determine your answer(s). Diagrams are not necessarily drawn to scale.

1. For which of the following systems of inequalities is (–5, 4) a solution? Select all that apply.

A. $\begin{cases} x+y<3 \\ y\geq 3x-1 \end{cases}$

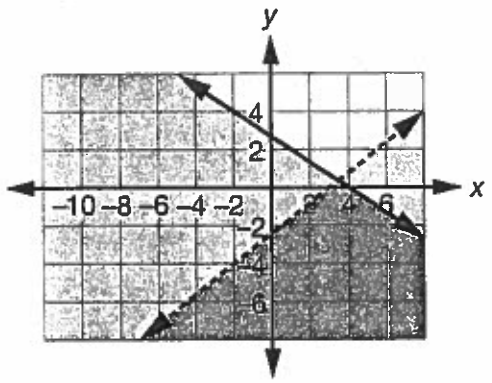
B. $\begin{cases} y<-x-1 \\ y\geq 3x+8 \end{cases}$

C. $\begin{cases} x+5y<12 \\ x-y<9 \end{cases}$

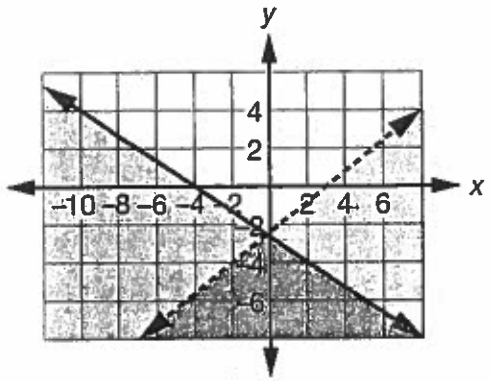
D. $\begin{cases} 2x-3y<1 \\ y\geq -2x-6 \end{cases}$

2. Which of the following is the graph of the system $\begin{cases} 2x+3y\leq 8 \\ 4x-5y<12 \end{cases}$?

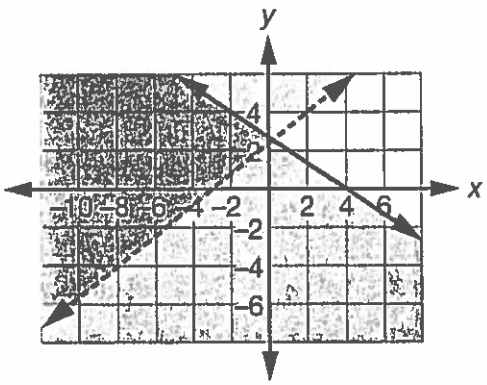
A.



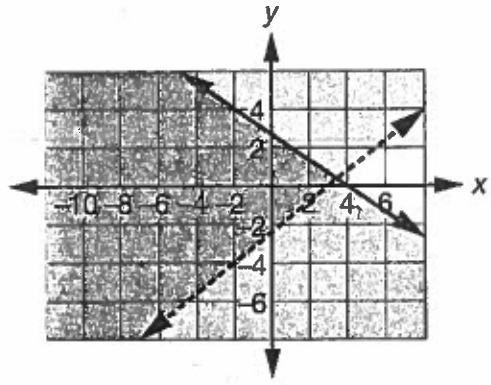
C.



B.



D.



3. Which of the following points are solutions to $\begin{cases} y<4x-3 \\ x-5y\leq 10 \end{cases}$? Select all that apply.

A. (1, 1)

B. (5, –1)

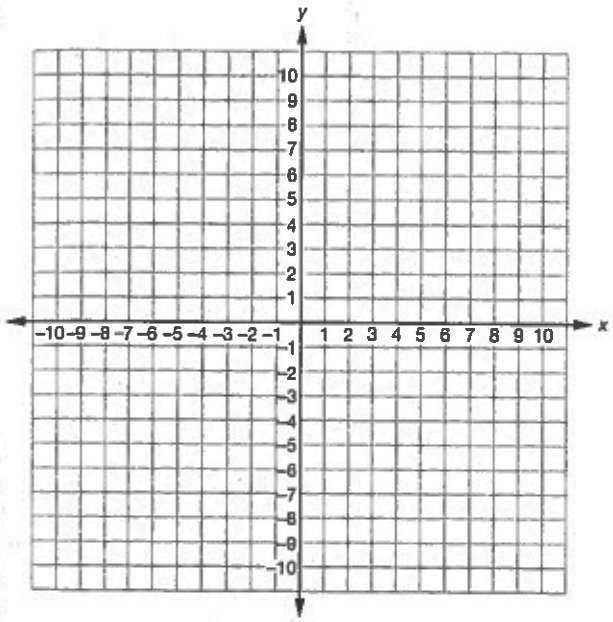
C. (4, 2)

D. (–3, 1)

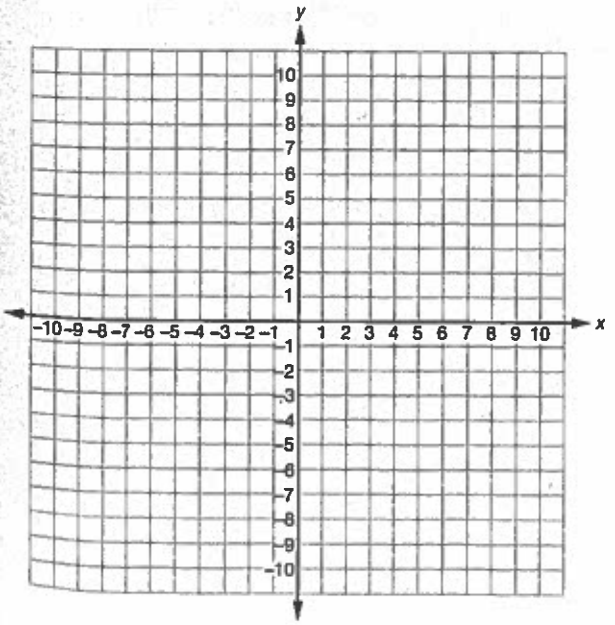
Open-Response Questions

Use the information provided to answer the questions in this part. Clearly indicate all your steps, and include substitutions, diagrams, graphs, charts, etc., as needed. Diagrams are not necessarily drawn to scale.

4. Graph the system $\begin{cases} y < 6x - 2 \\ x + 4y \geq 12 \end{cases}$.



5. Graph the system $\begin{cases} 2x - 3y > 6 \\ 4x - 6y \leq 24 \end{cases}$ and state 3 values in the solution set.



6. Garen builds furniture for a living. He sells chairs for $45 each and tables sell for $70 each. It takes Garen 4 hours and $10 worth of supplies to build each chair. A table requires 10 hours and $15 of supplies. Garen wants to work, at most, 40 hours per week and spend no more than $80 on materials. Write and solve a system of inequalities and state 3 combinations of chairs and tables he can make each week.