#1-5, Decide how many solutions the system has *and show your work.* (2 pt)

1. $\begin{cases} y = 2x - 2 \\ -2x + y = 1 \end{cases}$ $y = 2x + 1$ parallel — none

2. $\begin{cases} y = -4x \\ y = 2x + 3 \end{cases}$ intersect — one

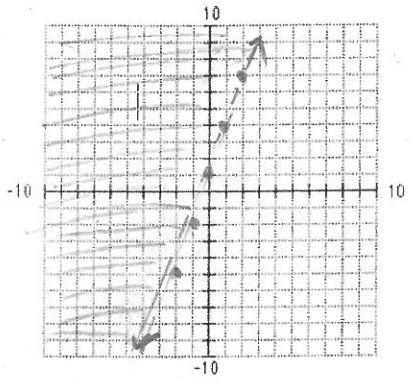
3. $\begin{cases} x + y = -4 \\ y = -x - 4 \end{cases}$ $-x$ $y = -x - 4$ same line — ∞

4. $\begin{cases} x + 2y = -4 \\ y = -\frac{1}{2}x - 4 \end{cases}$ $-x$, $\div 2$ $y = -2 - \frac{1}{2}x$ parallel — none

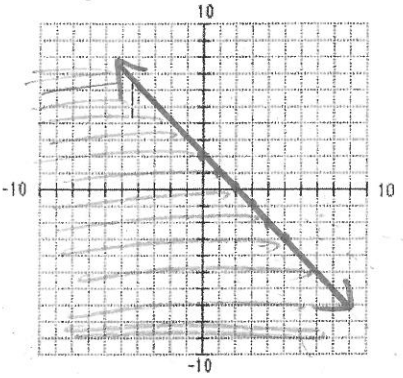
5. $\begin{cases} y = 3x - 1 \\ 2x + 5y = 6 \end{cases}$ $-2x$, $\div 5$ $y = \frac{6}{5} - \frac{2}{5}x$ intersecting lines — one

#6-11, Graph the inequality or system. (2 pt or 4 pt)

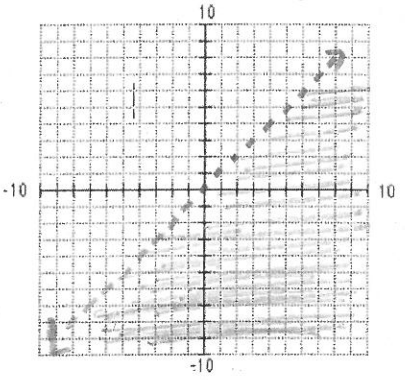
6. $y > 3x + 1$



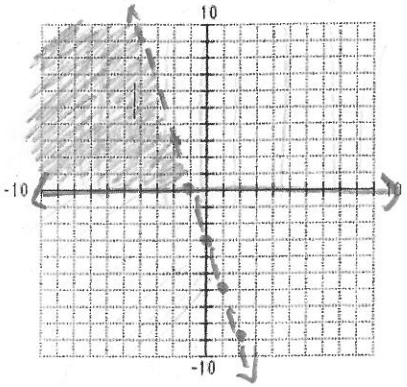
7. $x + y \leq 2$ $-x$ $y \leq -x + 2$



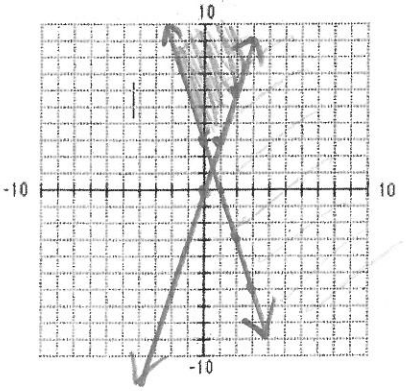
8. $-3x - 3y > 0$ $-3x$, $\div -3$ $y < 0 + 1x$



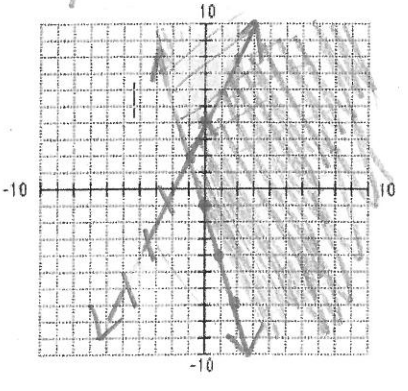
9. $\begin{cases} y < -3x - 3 \\ y \geq 0 \end{cases}$



10. $\begin{cases} y \geq 3x \\ 3x + y \geq 3 \end{cases}$ $-3x$



11. $\begin{cases} y < 2x + 4 \\ 6x + 2y \geq -2 \end{cases}$ $-6x$, $\div 2$ $y \geq -1 - 3x$



#12-14, Find the solution(s) to the system. (Using your graphing calc. is a good idea). (2 pt)

12. $\begin{cases} y = -7 + x \\ y = x^2 - 7 \end{cases}$ $(0, -7)$ & $(1, -6)$

13. $\begin{cases} y + 3x = 0 \\ y - 6 = -3x^2 \end{cases}$ $y = -3x$, $y = -3x^2 + 6$ $(-1, 3)$ & $(2, -6)$ ✓

14. $\begin{cases} y - 2x^2 = 1 \\ 2x + y = 3 \end{cases}$ $y = 1 + 2x^2$, $y = 3 - 2x$ $(.62, 1.76)$ $(-1.62, 6.24)$