Beginning Algebra
Study Guide 6
Due Date: $\qquad$

Name: $\qquad$
Class: $\qquad$
Score:

## No Work $\Leftrightarrow$ No Points

Use Pencil Only $\Leftrightarrow$ Be Neat \& Organized

1. (3 points) Solve $3 x-1 \leq-4$, then express your final answer both graphically as well as set-builder notation.

2. (3 points) Solve $-2 x+7 \geq 5$, then express your final answer both graphically as well as set-builder notation.

3. (3 points) Solve $2(x-1)>x-1$, then express your final answer both graphically as well as set-builder notation.
4. $\qquad$

5. (4 points) Solve $-2(x-3)+4<-(x-10)$, then express your final answer both graphically as well as interval notation.

6. (4 points) Solve $-10 \leq 4 x-6<2$, then express your final answer both graphically as well as interval notation.
7. $\qquad$

8. (4 points) Solve $-1 \leq 5-3 x<2$, then express your final answer both graphically as well as interval notation.

$\qquad$
9. (3 points) Solve $2 x+3 y \leq-12$ for the $y$ variable.
10. 
11. (3 points) Solve $4 x-3 y \geq 9$ for the $y$ variable.
12. 
13. (3 points) Solve $\frac{1}{2} x-\frac{2}{3} y \geq 1$ for the $y$ variable.
14. 
15. Translate the following into a mathematical notation:
(a) (1 point) $x$ is greater than -5.
(a) $\qquad$
(b) (1 point) $x$ is less than 3.
$\qquad$
(c) (1 point) $x$ is at most 10 .
(c) $\qquad$
(d) (1 point) $x$ is at least 0.
(d) $\qquad$
(e) (1 point) $x$ exceeds -5 .
(e) $\qquad$
(f) (1 point) $x$ is any value from -2 to 3 .
(f)
(g) (1 point) $x$ is between -4 and 4 , inclusive.
(g)
(h) (1 point) $x$ is between -2 and 5 , exclusive.
(h)
16. The manager of an art supply store discovers that they can sell $N$ sketch pads per month at the price of $P$ dollars each according to the formula $N=1800-250 P$. What price should they charge if they want to sell
(a) (3 points) at least 800 sketch pads each month?
$\qquad$
(b) (3 points) at most 1050 sketch pads each month?
(b) $\qquad$
(c) (3 points) from 800 to 1300 sketch pads each month?

## (c)

12. (3 points) Find the corresponding temperature range in degree Celsius by using the formula $F=\frac{9}{5} C+32$ if the temperature in degrees Fahrenheit is between $95^{\circ}$ and $113^{\circ}$, inclusive.
