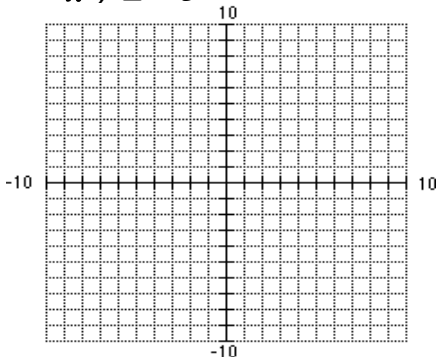# Day 06 Homework
Graphing Absolute Value & Linear Inequalities

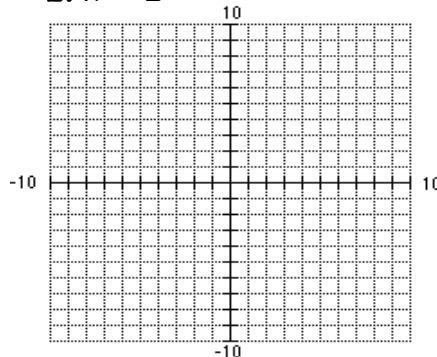Name _____

Date _____ Block _____

1-9: Graph each inequality. Do not use the calculator!
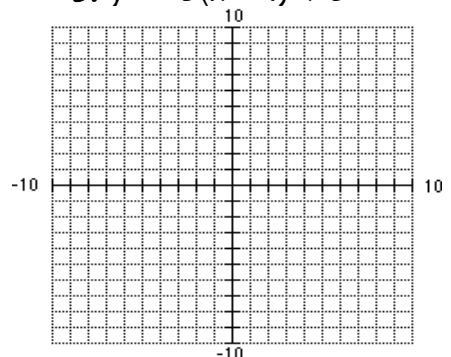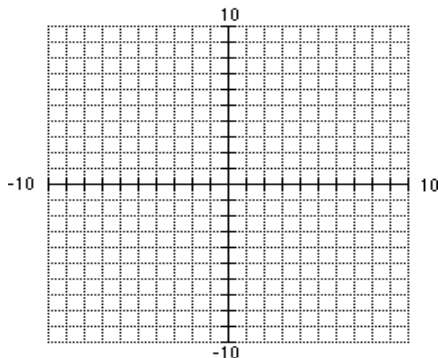
1. $y \leq -3$

2. $x > 2$

3. $y > -3(x - 4) + 5$

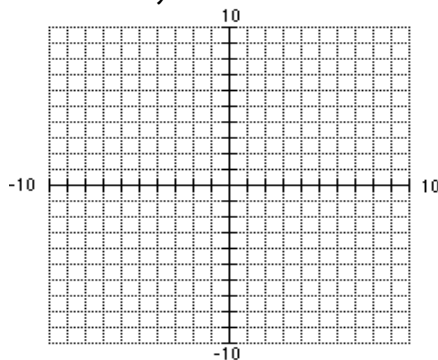**4.** $y < -5|x - 2| + 5$

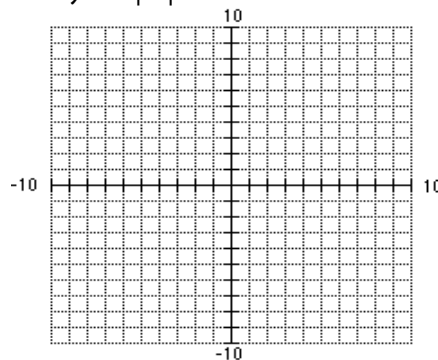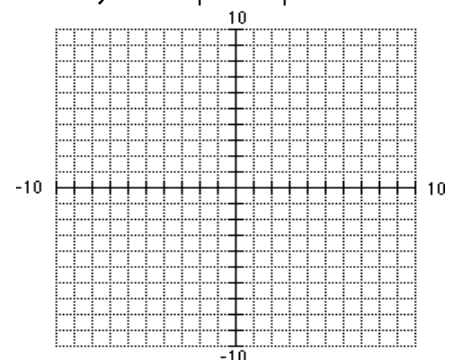**5.** $y < \frac{1}{2}|x+4| + 1$
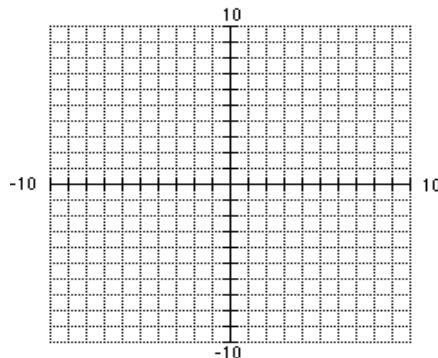
6. $y \geq -2(x - 1) + 2$
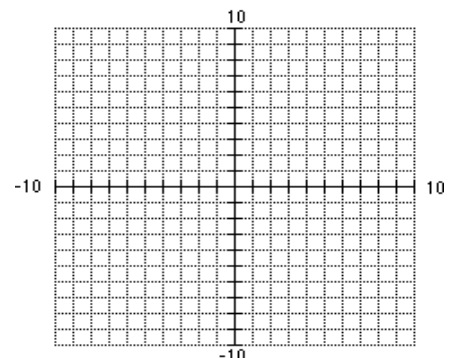
7. $x - 3y \leq 6$

8. $y > |x| - 1$

9. $y > -3|x + 1| - 2$

10. COMPUTERS A school system is buying new computers. They will buy desktop computers costing $1000 per unit, and notebook computers costing $1200 per unit. The total cost of the computers cannot exceed $80,000.

a. Write an inequality that describes this situation.

b. Graph the inequality.

c. If the school wants to buy 50 of the desktop computers and 25 of the notebook computers, will they have enough money?

Computers Purchased

Notebooks: 0 10 20 30 40 50 60 70 80
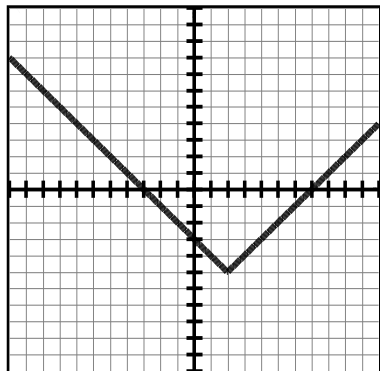
Desktops: 10 20 30 40 50 60 70 80 90 100
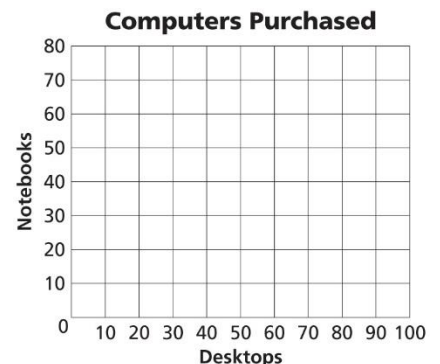
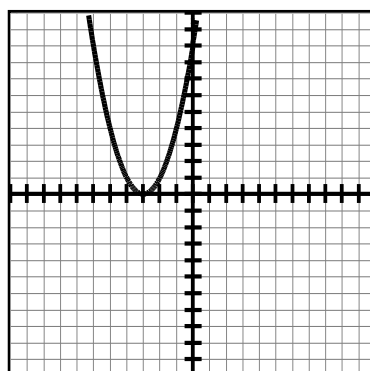<u>Review of Transforming Functions:</u> *Given the following formula:*   f(x) = a | x – h | + k

♣ a is what causes the graph to _____.

♣ h causes the function to shift _____.

♣ k causes the function to shift _____.

♣ Your starting point is always _____.

Write the function for each of the following graphs using the formula above. Take the parent function and apply the transformation to write your equation.
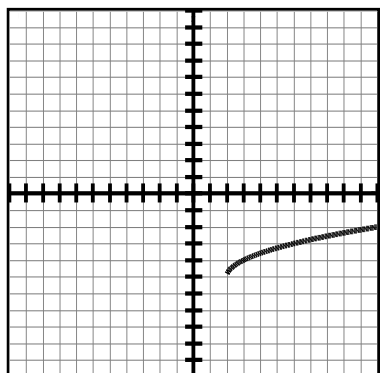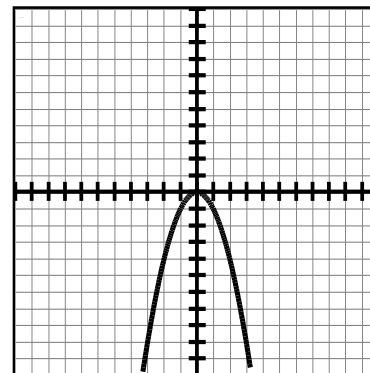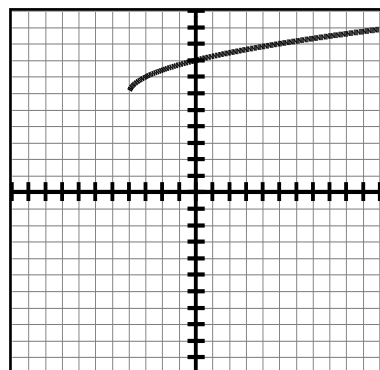
11. f(x) = _____ .

12. f(x) = _____ .

13. f(x) = _____ .

14. f(x) = _____ .

15. f(x) = _____ .

16. f(x) = _____ .